* * * * * * * * * Welcome to STN International * * * * * * * * *

NEWS 1 Web Page URLs for STN Seminar Schedule - N. America
NEWS 2 Apr 08 "Ask CAS" for self-help around the clock
NEWS 3 Apr 09 BEILSTEIN: Reload and Implementation of a New Subject Area
NEWS 4 Apr 09 ZDB will be removed from STN
NEWS 5 Apr 19 US Patent Applications available in IFICDB, IFIPAT, and IFIUDB
NEWS 6 Apr 22 Records from IP.com available in CAPLUS, HCAPLUS, and CAPLUS
NEWS 7 Apr 22 BIOSIS Gene Names now available in TOXCENTER
NEWS 8 Apr 22 Federal Research in Progress (FEDRIP) now available
NEWS 9 Jun 03 New e-mail delivery for search results now available
NEWS 10 Jun 10 MEDLINE Reload
NEWS 11 Jun 10 PCTFULL has been reloaded
NEWS 12 Jul 02 FOREGE no longer contains STANDARDS file segment
NEWS 13 Jul 22 USAN to be reloaded July 28, 2002;
saved answer sets no longer valid
NEWS 14 Jul 29 Enhanced polymer searching in REGISTRY
NEWS 15 Jul 30 NETFIRST to be removed from STN
NEWS 16 Aug 08 CANCERLIT reload
NEWS 17 Aug 08 PHARMAMarketLetter(PHARMAML) - new on STN
NEWS 18 Aug 08 NTIS has been reloaded and enhanced
NEWS 19 Aug 19 Aquatic Toxicity Information Retrieval (AQUIRE) now available on STN
NEWS 20 Aug 19 IFIPAT, IFICDB, and IFIUDB have been reloaded
NEWS 21 Aug 19 The MEDLINE file segment of TOXCENTER has been reloaded
NEWS 22 Aug 26 Sequence searching in REGISTRY enhanced
NEWS 23 Sep 03 JAPIO has been reloaded and enhanced
NEWS 24 Sep 16 Experimental properties added to the REGISTRY file
NEWS 25 Sep 16 Indexing added to some pre-1967 records in CA/CAPLUS
NEWS 26 Sep 16 CA Section Thesaurus available in CAPLUS and CA
NEWS 27 Oct 01 CASREACT Enriched with Reactions from 1907 to 1985

NEWS EXPRESS February 1 CURRENT WINDOWS VERSION IS V6.0d,
CURRENT MACINTOSH VERSION IS V6.0a(ENG) AND V6.0Ja(JP),
AND CURRENT DISCOVER FILE IS DATED 05 FEBRUARY 2002
NEWS HOURS STN Operating Hours Plus Help Desk Availability
NEWS INTER General Internet Information
NEWS LOGIN Welcome Banner and News Items
NEWS PHONE Direct Dial and Telecommunication Network Access to STN
NEWS WWW CAS World Wide Web Site (general information)

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* * * * * * * * * * * * * * * STN Columbus * * * * * * * * * * * * * * *

FILE 'HOME' ENTERED AT 12:22:30 ON 09 OCT 2002

=> file reg

FILE 'REGISTRY' ENTERED AT 12:22:38 ON 19 OCT 2002
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.
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Property values tagged with IC are from the DIC/VINITI data file
provided by InfoChem.

STRUCTURE FILE UPDATES: 7 OCT 2002 HIGHEST RN 459794-15-4
DICTIONARY FILE UPDATES: 7 OCT 2002 HIGHEST RN 459794-15-4

TSCA INFORMATION NOW CURRENT THROUGH MAY 20, 2002

Please note that search-term pricing does apply when
processing SmartSELECT searches.

Crossover limits have been increased. See HELP CROSSOVER for details.

Experimental and calculated property data are now available. See HELP
PROPERTIES for more information. See STNote 27, Searching Properties
in the CAS Registry File, for complete details:
http://www.cas.org/ONLINE/STN/STNOTES/stnotes27.pdf

=> s silane/cn(3a)tetramethoxy/cn

PROXIMITY OPERATOR LEVEL NOT CONSISTENT WITH
PRELI CODE - 'AND' OPERATOR ASSUMED 'SILANE/CN(3A)TETRAMETHO'
            1 SILANE/CN
            0 TETRAMETHOXY/CN
L1   0 SILANE/CN(3A)TETRAMETHOXY/CN

=> c3h10o3si/mf

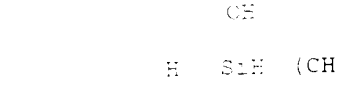
C3H10O3SI IS NOT A RECOGNIZED COMMAND
The previous command name entered was not recognized by the system.
For a list of commands available to you in the current file, enter
"HELP COMMANDS" at an arrow prompt (=>).

=> s c3h10o3si/mf

L2   11 C3H10O3SI/MF

=> d 1-11 ide

L2 ANSWER 1 OF 11 REGISTRY COPYRIGHT 2002 ACS
RN 244940-33-6 REGISTRY
CN Silanediol, (3-hydroxypropyl)- (9CI) (CA INDEX NAME)
FS 3D CONCORD
MF C3 H10 O3 Si
CI COM
SR CA



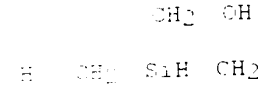
PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

L2 ANSWER 2 OF 11 REGISTRY COPYRIGHT 2002 ACS

RN [illegible] REGISTRY
CN Silanediol, (2-hyd[redacted]yethyl methyl- (9CI) (CA INDEX NAME)
FS 3D CONCORD
MF C3 H10 O3 Si
SR CAOLD
DR CA

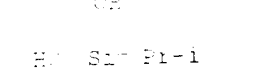
PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

L1 ANSWER 3 OF 11 REGISTRY COPYRIGHT 2002 ACS
RN 171063-14-2 REGISTRY
CN Methanol, silylidynetris- (9CI) (CA INDEX NAME)
FS 3D CONCORD
MF C3 H10 O3 Si
SR CAOLD
DR CA



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

L1 ANSWER 4 OF 11 REGISTRY COPYRIGHT 2002 ACS
RN 159225-94-2 REGISTRY
CN Silanetriol, (1-methylethyl)- (9CI) (CA INDEX NAME)
FS 3D CONCORD
MF C3 H10 O3 Si
SR CAOLD
DR CA
LC STN Files: CA, CAPLUS, USPATFULL



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

1 REFERENCES IN FILE CA (1962 TO DATE)
1 REFERENCES IN FILE CAPLUS (1962 TO DATE)

L1 ANSWER 5 OF 11 REGISTRY COPYRIGHT 2002 ACS
RN 151103-18-3 REGISTRY
CN Silanediol, 1-ethyl-1-methoxy- (9CI) (CA INDEX NAME)
OTHER NAMES:
CN Ethyldihydroxymethoxysilane
FS 3D CONCORD

MF C3 H10 O3 Si
CI COM
SR CA
LC STN Files: CA, CAPLUS

HO

M1 Si Et

Et

PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

1 REFERENCES IN FILE CA (1962 TO DATE
1 REFERENCES IN FILE CAPLUS (1962 TO DATE)

L1 ANSWER 6 OF 11 REGISTRY COPYRIGHT 2002 ACS
RN 14208-49-4 REGISTRY
CN Silanol, dimethoxymethyl- (9CI) (CA INDEX NAME)
OTHER NAMES:
CN Hydroxydimethoxymethylsilane
FS 3D CONCORD
MF C3 H10 O3 Si
CI COM
SR CA
LC STN Files: BEILSTEIN*, CA, CAPLUS, IFICDB, IFIUDB
(*File contains numerically searchable property data

HO

MeO Si Me

OMe

PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

4 REFERENCES IN FILE CA (1962 TO DATE)
1 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
4 REFERENCES IN FILE CAPLUS (1962 TO DATE)

L1 ANSWER 7 OF 11 REGISTRY COPYRIGHT 2002 ACS
RN 37109-72-1 REGISTRY
CN Silane, tri(methoxy-d3)- (9CI) (CA INDEX NAME)
MF C3 H D9 O3 Si
LC STN Files: BEILSTEIN*, CA, CAPLUS
(*File contains numerically searchable property data)

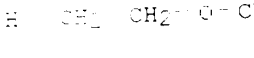
O CD3

D-C SiH-O-CD3

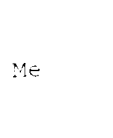
1 REFERENCES IN FILE CA (1962 TO DATE)
1 REFERENCES IN FILE CAPLUS (1962 TO DATE)

L1 ANSWER 8 OF 11 REGISTRY COPYRIGHT 2002 ACS
RN 37-67-43-2 REGISTRY
CN Silanol, [(2-hydroxyethoxy)methyl]- (9CI) (CA INDEX NAME)
OTHER NAMES:

CN Ethanol, 2-[(hydroxysilyl)methoxy]-
FS PF CONCORD
MF **C3 H10 O3 Si**



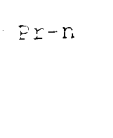
L4 ANSWER 9 OF 11 REGISTRY COPYRIGHT 2002 ACS
RN [illegible]-04-1 REGISTRY
CN Silanediol, ethoxymethyl- (6CI, 8CI) (CA INDEX NAME)
OTHER NAMES:
CN Ethoxydihydroxy(methyl)silane
FS PF CONCORD
[illegible] [illegible]12-84-3
MF **C3 H10 O3 Si**
[illegible]
LC STN Files: CA, CAPLUS



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

4 REFERENCES IN FILE CA (1962 TO DATE)
4 REFERENCES IN FILE CAPLUS (1962 TO DATE)

L4 ANSWER 10 OF 11 REGISTRY COPYRIGHT 2002 ACS
RN [illegible]-30-9 REGISTRY
CN Silanetriol, propyl- (8CI, 9CI) (CA INDEX NAME)
OTHER NAMES:
CN 1-Propaneorthosiliconic acid
FS PF CONCORD
MF **C3 H10 O3 Si**
CI COM
LC STN Files: CA, CAPLUS, IFICDB, IFIUDB, TOXCENTER, USPATFULL



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

7 REFERENCES IN FILE CA (1962 TO DATE)
3 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
7 REFERENCES IN FILE CAPLUS (1962 TO DATE)

L4 ANSWER 11 OF 11 REGISTRY COPYRIGHT 2002 ACS
RN [illegible]-90-3 REGISTRY
CN Silane, trimethoxy- (6CI, 7CI, 8CI, 9CI) (CA INDEX NAME)
OTHER NAMES:
CN LS 330
CN Trimethoxysilane
FS PF CONCORD

MF C3 H10 O3 Si

STN Files: AGRICOLA, BEILSTEIN*, BIOBUSINESS, BIOSIS, CA, CANCERLIT, AOLD, CAPLUS, CASREACT, CENB, CEN, CHEMCATS, CHEMINFORMRX, CHEMLIST, IN, CSCHEM, DETHERM*, EMBASE, GMELIN*, HSDB*, IFICDB, IFIPAT, IFIUDB, MEDLINE, MSDS-OHS, NIOSHTIC, PIRA, PROMT, RTECS*, TOXCENTER, USPAT2, USPATFULL
(*File contains numerically searchable property data
Other Sources: EINECS**, NDSL**, TSCA**
(**Enter CHEMLIST File for up-to-date regulatory information)

file

MF C3 H10 O3 Si

PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT**

836 REFERENCES IN FILE CA (1962 TO DATE)
115 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
837 REFERENCES IN FILE CAPLUS (1962 TO DATE)
14 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

s tetramethyldisiloxane/cn

L1 1 TETRAMETHYLDISILOXANE/CN

d ide

L1 ANSWER 1 OF 1 REGISTRY COPYRIGHT 2002 ACS
RN 3277-26-7 REGISTRY
CN Disiloxane, tetramethyl- (7CI, 8CI) (CA INDEX NAME)
OTHER NAMES:
CN **Tetramethyldisiloxane**
MF C4 H14 O Si2
LC STN Files: CA, CAOLD, CAPLUS, CHEMCATS, CHEMLIST, CSCHEM, IFICDB, IFIPAT, IFIUDB, TOXCENTER, USPAT2, USPATFULL
Other Sources: EINECS**, NDSL**, TSCA**
(**Enter CHEMLIST File for up-to-date regulatory information)

HCF1 > SiH3

L1 (71 Me)

90 REFERENCES IN FILE CA (1962 TO DATE)
8 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
90 REFERENCES IN FILE CAPLUS (1962 TO DATE)
1 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

file ca

FILE 'CA' ENTERED AT 12:29:46 ON 09 OCT 2002
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[illegible] of the articles to which records in this database refer is [illegible] by the publishers listed in the PUBLISHER (PB) field. Available [illegible] fields published or updated in Chemical Abstracts after December [illegible], unless otherwise indicated in the original publications.

FILE COVERS 1907 - 3 Oct 2002 VOL 137 ISS 15
FILE LAST UPDATED: 3 Oct 2002 (20021003/ED)

This file contains CAS Registry Numbers for easy and accurate substance identification.

CAS roles have been modified effective December 16, 2001. Please review your SDI profiles to see if they need to be revised. For information on CAS roles, enter HELP ROLES at an arrow prompt or use the CAS Roles thesaurus (/RL field) in this file.

=> d his

FILE 'HOME' ENTERED AT 12:22:30 ON 09 OCT 2002

FILE 'REGISTRY' ENTERED AT 12:22:34 ON 09 OCT 2002
L1 0 S SILANE/CN(3A)TETRAMETHOXY/CN
L2 11 S C3H10O3SI/MF
L3 1 S TETRAMETHYLDISILOXANE/CN

FILE 'CA' ENTERED AT 12:29:40 ON 09 OCT 2002

=> s l2 or l3

849 L2
90 L3
L4 934 L2 OR L3

=> s pecvd#/bi,ab or pe/bi,ab(5w)cvd#/bi,ab or plasma/bi,ab(10w)(cvd# or deposit?)/bi,ab

4145 PECVD#/BI
3378 PECVD#/AB
17960 PE/BI
16476 PE/AB
47531 CVD#/BI
34188 CVD#/AB
121 PE/BI,AB(5W)CVD#/BI,AB
577326 PLASMA/BI
595266 PLASMA/AB
47531 CVD#/BI
34188 CVD#/AB
688729 DEPOSIT?/BI
578898 DEPOSIT?/AB
33167 PLASMA/BI,AB(10W)(CVD# OR DEPOSIT?)/BI,AB
L5 34306 PECVD#/BI,AB OR PE/BI,AB(5W)CVD#/BI,AB OR PLASMA/BI,AB(10W)(CVD# OR DEPOSIT?)/BI,AB

=> s insulating or insulator or dielectric or sio2 or sio or oxide# or oxid-# /bi,ab

55959 INSULATING/BI
78114 INSULATING/AB

90742 INSULATOR/BI
54500 INSULATO[illegible]B
[illegible]479 DIELECTRIC/BI
2144 DIELECTRIC/AB
[illegible]8627 SIO2/BI
[illegible]2850 SIO2/AB
9407 SI[illegible]/BI
8849 SI[illegible]/AB
[illegible]1924 OXIDE#/BI
[illegible]8749 OXIDE#/AB
[illegible]701 DIOXIDE#/BI
45537 DIOXIDE#/AB
[illegible]14867 (INSULATING OR INSULATOR OR DIELECTRIC OR SIO2 OR SIO OR OXIDE#

OR DIOXIDE#)/BI,AB

FILE 'HOME' ENTERED AT 12:22:30 ON 09 OCT 2002

FILE 'REGISTRY' ENTERED AT 12:22:34 ON 09 OCT 2002
[illegible] S SILANE/CN(3A TETRAMETHOXY/CN
[illegible] S C8H10O3SI/MF
1 S TETRAMETHYLDISILOXANE/CN

FILE 'CA' ENTERED AT 12:29:4[illegible] ON 09 OCT 2002
934 S L2 OR L3
34306 S PECVD#/BI,AB OR PE/BI,AB(5W)CVD#/BI,AB OR
PLASMA/BI,AB 10W (C
[illegible]14867 S (INSULATING OR INSULATOR OR DIELECTRIC OR SIO2 OR SIO OR
[illegible]

=> s 14 and 15 and 16

L7 29 L4 AND L5 AND L6

=> d 1-29 bib ab

L7 ANSWER 1 OF 29 CA COPYRIGHT 2002 ACS
AN 1[illegible]7:40045 CA
TI Deposition process based on organosilicon precursors in **dielectric** barrier discharges at atmospheric pressure-a comparison
AU [illegible]onnenfeld, A.; Tun, T. M.; Zajickova, L.; Kozlov, K. V.; Wagner, H. E.; Behnke, J. F.; Hippler, R.
CS Institut fur Physik, Ernst-Moritz-Arndt-Universitat, Greifswald, Germany
SO Plasmas and Polymers (2001), 6(4), 237-266
CODEN: PLPOFQ; ISSN: 1084-0184
PB Kluwer Academic/Plenum Publishers
DT Journal
LA English
AB Dielec. barrier discharges (DBD) at atm. pressure are presented as a tool to create organosilicon deposits on tech. planar Al substrates (up to 15 .times. 8 cm2) by admixing small amts. of hexamethyldisiloxane (HMDSO) and tetraethoxysilane (TEOS) to the carrier gas of the discharges. Using barrier materials of different specific capacities (2.8 .times. 104 and [illegible].2 pF/cm2) in two electrode arrangements operated at <1 W, the influence of the filament properties on the deposition was studied. In comparison to these arrangements, a 3rd electrode setup with a barrier of the specific capacity of 2.9 pF/cm2 is operated at .apprx.50 W to study the influence of the specific energy of the **plasma** (energy per mol. on the **deposition** process. The plasma chem. process was studied [illegible] by Gas Chromatog., and properties of the plasma-treated substrates were examd. by XPS, FTIR spectroscopy, as well as visually.

FILE CONT 55 THERE ARE 55 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L7 ANSWER 2 OF 29 CA COPYRIGHT 2002 ACS
AN 136:111037 CA
TI Device for the production of barrier layers for gaseous and or liquid substances on substrates, in particular plastic substrates, by means of a **plasma**-enhanced chemical vapor **deposition** in a vacuum treatment chamber
PA Applied Films G.m.b.H. & Co. K.-G., Germany
SO Ger. Gebrauchsmusterschrift, 13 pp.
CODEN: GGXXFF
DT Patent
LA German
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 20112984	U1	20020131	DE 2001-20112984	20010813

AB A device is presented for the prod. of barrier layers for gaseous and/or liq. substances on substrates, in particular plastic substrates, by means of a **plasma**-enhanced chem. vapor **deposition** in a vacuum treatment chamber. In accordance with the invention, a metal, a metal compd., a semiconductor, or a semiconductor compd. is evapd. out of a crucible, and a reactive gas is flowed over a gas inlet. A plasma is formed via an anodic arc app. to coat the substrate with at least one layer of a substance having a matrix consisting of an **oxide** compd. with an increased carbon content.

L7 ANSWER 3 OF 29 CA COPYRIGHT 2002 ACS
AN 136:91485 CA
TI Method to restore hydrophobicity in **dielectric** films and materials
IN Hacker, Nigel P.; Thomas, Michael; Drage, James S.
PA Honeywell International, Inc., USA
SO PCT Int. Appl., 34 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002001621	A2	20020103	WO 2001-US19466	20010619
WO 2002001621	A3	20020321		

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM

RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

AU 2001066998	A5	20020108	AU 2001-66998	20010619
PRAI US 2000-214219P	P	20000623		
WO 2001-US19466	W	20010619		

AB **SiO2** dielec. films, whether nonporous fluored **SiO2** dielecs. or nonporous **SiO2** dielecs. are readily damaged by fabrication methods and reagents that reduce or remove hydrophobic properties from the dielec. surface. The invention provides for methods of imparting hydrophobic properties to such damaged **SiO2** dielec. films present on a substrate. The invention also provides plasma-based methods for imparting hydrophobicity to both new and damaged **SiO2** dielec. films. Semiconductor devices prepd. by the inventive processes are also provided.

L7 ANSWER 4 OF 29 CA COPYRIGHT 2002 ACS

AN 135:100955 CA
TI **Plasma CVD** of **insulator** film and semiconductor device
IN Inoura, Hiroshi; Suzuki, Tomomi; Maeda, Kazuo; Shiotani, Kimi; Ohira, Koichi
PA Canon Sales Co., Inc., Japan; Semiconductor Process Laboratory Co., Ltd.
SO Jpn. Kokai Tokkyo Koho, 9 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 2001-189311	A2	20010710	JP 1999-375610	19991228

MARPAT 135:100955
AB The title method involves carrying out a plasma reaction of $Si(OR)_nH_m$ (R = alkyl and n + m = 4), $SiF_p(OR)_q$ (R = alkyl and p + q = 4), and an oxidizing gas. Alternatively, $Si_rF_rH_s$ (R = alkyl and s + r = 4) or a siloxane compd. may be used. Specifically, the oxidizing gas may comprise N_2O, O_2, H_2O, or CO_2. Addnl., a C_pH_q compd. such as CH_4, C_2H_4, or C_2H_6 may be used. A semiconductor device having the above **insulator** film is also described.

L ANSWER 5 OF 29 CA COPYRIGHT 2002 ACS
AN 135:85702 CA
TI Silicon compound **dielectric** film plasma forming method and semiconductor device
IN Shioya, Yoshimi; Kotake, Yuichiro; Yamamoto, Youichi; Suzuki, Tomomi; Ikakura, Hiroshi; Ohgawara, Shoji; Ohira, Kouichi; Maeda, Kazuo
PA Canon Sales Co., Inc., Japan; Semiconductor Process Laboratory Co., Ltd.
SO Eur. Pat. Appl., 42 pp.
CODEN: EPXXDW
DT Patent
LA English
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI EP 1113489	A2	20010704	EP 2000-128421	20001228
EP 1113489	A3	20020605		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
JP 2002083812	A2	20020322	JP 2000-263991	20000831
US 2001034140	A1	20011025	US 2000-742242	20001222
PRAI JP 1999-375811	A	19991228		
JP 2000-188307	A	20000622		
JP 2000-263991	A	20000831		

MARPAT 135:85702
AB There is provided the film forming method of forming the **insulating** film 204 contg. Si on the substrate 103 by plasma polymn. of the compd. having the siloxane bonds and the oxidizing gas to react with each other.

L ANSWER 6 OF 29 CA COPYRIGHT 2002 ACS
AN 135:8979 CA
TI Photocatalytic coating for self-cleaning automotive headlights
IN Hu, Ing-Feng; O'Connor, Paul J.; Chiao, Yi-Hung
PA Dow Chemical Company, USA
SO PCT Int. Appl., 16 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE

PI WO 2001040705 A1 20010607 WO 2000-US32[illegible] 20001124
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BZ, CA, CH, CN,
CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR,
HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT,
LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU,
SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN,
YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY,
DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF,
BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG
US 2001030876 A1 20011018 US 2000-731480 20001204
PRAI JP 1999-169027 P 19990615
AB The automotive headlight lamps made of glass or plastic are coated on the internal reflector surface with a transparent layer of photocatalytic semiconductor for self-cleaning operation. The catalyst can be applied

by sol-gel coating, or by chem.-vapor deposition. The light in operation of the headlight is sufficient for photoexcitation of the catalyst to decrease the accumulated aq. or org. contaminants on the internal surface.

The typical sol-gel coating for polycarbonate headlight contains

colloidal

SiO2 15 parts, TiO2 powder as activated semiconductor 4 parts, crosslinking Z-6040 silane 25 parts, and water as the balance. The sol-gel coating is dried at 60.degree., and hardened by heating in an oven for 45 min at 120.degree..

RE.CNT 7 THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L7 ANSWER 7 OF 29 CA COPYRIGHT 2002 ACS
AN 134:23353 CA
TI Antireflection film
IN Takematsu, Kiyotaka
PA Dainippon Printing Co., Ltd., Japan
SO Jpn. Kokai Tokkyo Koho, 7 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2000338307	A2	20001208	JP 1999-150688	19990528

AB The invention refers to an antireflection film comprising a substrate, a hard coat layer, and the following layers starting at the air surface: an 80 - 110 nm low n layer, a 70 -90 nm high n layer, a 35 - 55 nm low n layer, a 10 -30 nm high n layer, a 35 - 55 nm low n layer, wherein the low

n layer is formed via **plasma CVD** and using a methylated silica, and the high n layer is a metal **oxide** also formed via **plasma CVD**, in order to produce an antireflection film with good reflection properties, and good adhesion and

durability of the layers.

L7 ANSWER 8 OF 29 CA COPYRIGHT 2002 ACS
AN 133:160354 CA
TI Method and apparatus for forming a porous **SiO2** interlayer **insulating** film
IN Maeda, Kazuo
PA Canon Sales Co., Inc., Japan; Semiconductor Process Laboratory Co., Ltd.
SO Eur. Pat. Appl., 24 pp.
CODEN: EPXXDW
DT Patent
LA English
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE

PI EP 1039519 [redacted] 20011227 EP 2000-[redacted] 20000317
EP 1039519 A3 20011228
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO
JP 2000277507 A2 20001006 JP 1999-[redacted] 19990326
JP 3184177 B2 20010709
KR 1999-81180 A 19990826
AB Disclosed is a method for forming an interlayer **insulating** film comprising the steps of: forming an underlying **insulating** film on a substrate; forming a film contg. B, C and H2O on the underlying **insulating** film by **plasma** enhanced **CVD** using a source gas contg. an Si-C-O-H compd., an oxidative gas and a compd. contg. B; releasing C and H2O in the film from the film by annealing the film, and thereby forming a porous **SiO2** film contg. B; and subjecting the porous **SiO2** film contg. B to H plasma treatment, and then forming a cover **insulating** film.

L7 ANSWER 9 OF 29 CA COPYRIGHT 2002 ACS
AN 2002:80445 CA
TI Overall kinetics of SiOx remote-**PECVD** using different organosilicon monomers
AU Beyer, Ch.; Bapin, E.; Von Rohr, Ph. Rudolf
CS Institute of Process Engineering, ETH Zurich, Zurich, 8092, Switz.
SO Surface and Coatings Technology (1999), 116-119, 974-978
CODEN: SCTEEJ; ISSN: 0257-8972
PB Elsevier Science S.A.
DT Journal
LA English
AB An exptl. study was performed using nine different organosilicon monomers for the deposition of silicon **oxide** films by remote **plasma**-enhanced **CVD**. The measured deposition rates are interpreted with a previously developed semi-empirical model. The model enables the estn. of the crit. flow rates of oxygen atoms necessary to achieve a complete monomer conversion. The crit. flow rates can be correlated to the monomer structure. Starting from tetramethoxysilane and tetraethoxysilane, the crit. flow rates of oxygen atoms increase when alkoxy groups are replaced by alkyl groups. A comparison between the methoxy/methyl and the ethoxy/ethyl series shows that monomers contg. ethoxy groups are easier to deposit than those contg. methoxy groups. These observations are discussed with respect to the possible reaction mechanism.
RE.CNT 15 THERE ARE 15 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L7 ANSWER 10 OF 29 CA COPYRIGHT 2002 ACS
AN 2002:17002 CA
TI Methods for applying wear protective coating systems with optical properties on surfaces
IN Baumhnabel, Johannes; Voigt, Johannes
PA Bosch, Robert, G.m.b.H., Germany
SO Ger. Offen., 10 pp.
CODEN: GWXXBX
DT Patent
LA German
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI DE 19824364	A1	19991202	DE 1998-19824364	19980530
WO 9963129	A1	19991209	WO 1999-DE1526	19990504
W: CZ, JP, US				
RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
EP 1088116	A1	20010404	EP 1999-[redacted]	19990504

R: CH, DE, FR, GB, LI

CA 2002517611 [redacted] JP 2000-552[redacted] 19990504

PRAI DE 1998-19824364 A 19980530

WO 1999-DE1326 W 19990504

AB Methods for applying wear-resistant coating systems with optical properties on surface are described which entail a two-step deposition process, with a **plasma**-assisted **CVD** process being carried out to form a host matrix material layer on the substrate and a phys. vapor deposition process being carried out to introduce optically functional materials into the matrix. The coatings may be UV-reflecting IR-absorbing coatings.

L7 ANSWER 11 OF 29 CA COPYRIGHT 2002 ACS

AN 131:123593 CA

TI **Plasma** enhanced chemically vapor **deposited** thin films for microelectromechanical systems applications with tailored optical, thermal, and mechanical properties

AU Klein, M. W.; Goodman, R. B.; Rothschild, M.

CS Lincoln Laboratory, Massachusetts Institute of Technology, Lexington, MA, 02420, USA

SO Journal of Vacuum Science & Technology, B: Microelectronics and Nanometer Structures (1999), 17(3), 1045-1049
CODEN: JVTBD9; ISSN: 0734-211X

PB American Institute of Physics

DT Journal

LA English

AB Microbridge materials optimized for room temp. IR microbolometers have been fabricated using **plasma** enhanced chem. vapor **deposition** (**PECVD**). Thin films were deposited from tetramethyldisiloxane (TMDS) and oxygen. They have a 4.times. lower thermal cond. than that of Si_3N_4 and an inherent absorption coeff. 8-12 .mu.m range) approx. half that of nitride. The **PECVD** films deposited from TMDS are compatible with current complementary metal-**oxide**-semiconductor processing and have been shown to have adequate mech. strength for use as microbolometer membranes.

RE.CNT 11 THERE ARE 11 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L7 ANSWER 12 OF 29 CA COPYRIGHT 2002 ACS

AN 130:272074 CA

TI Method for coating elastomer components

IN Spallek, Michael; Walther, Marten; Danielzik, Burkhard; Kuhr, Markus

PA Schott Glas, Germany

SO Ger., 6 pp.
CODEN: GWXXAW

DT Patent

LA German

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
	DE 19754056	C1	19990408	DE 1997-19754056	19971205
	EP 922647	A1	19990616	EP 1998-121450	19981111
	EP 922647	B1	20010718		
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
	JP 11263859	A2	19990928	JP 1998-341404	19981201
	US 6123991	A	20000926	US 1998-206164	19981204

PRAI DE 1997-19754056 A 19971205

AB Elastomer components for medical/pharmaceutical use such as injections, infusions or piston-sprays are coated by **plasma**-enhanced chem. vapor **deposition** of siloxanes or modified silicon **dioxides** in a continuous process for friction redn.

L7 ANSWER 13 OF 29 CA COPYRIGHT 2002 ACS

AN 130:8967 CA

TI Silicon **dioxide** deposition by plasma activated evaporation

Process
IN Iacovangelo, Charl[illegible] Dominic
PA General Electric Company, USA
Eur. Pat. Appl., 7 pp.
CODEN: EPXXDW
DT Patent
LA English
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI EP 887438	A1	1998[illegible]	EP 1998-305079	19980626
EP 887438	B1	200[illegible]		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
BR 9802214	A	1999[illegible]	BR 1998-2214	19980624
CA 2241678	AA	19981226	CA 1998-2241678	19980625
JP 11071676	A2	[illegible]	JP 1998-[illegible]	[illegible]
CN 1210899	A	[illegible]7	CN 1998-[illegible]	19980626
ES 2149631	T3	[illegible]	ES 1998-305079	19980626
US 6379757	B1	20020430	US 1999-354258	19990715
PRAI US 1997-50820P	P	19970626		
US 1998-59109	A	19980413		

AB A process for the deposition of scratch-resistant coatings on various substrates comprises evapg. metals or metal **oxides** into an Ar and N2O plasma which is directed to the surface to be coated. Thus, **SiO2** was deposited on a polycarbonate.

RE.CNT 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L1 ANSWER 14 OF 29 CA COPYRIGHT 2002 ACS
AN 1[illegible]:42526 CA
TI Protective coating by high rate arc **plasma deposition**
IN Yang, Barry Lee-Mean; Gasworth, Steve Marc
PA General Electric Company, USA
SO Eur. Pat. Appl., 9 pp.
CODEN: EPXXDW
DT Patent
LA English
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI EP 887437	A2	19981230	EP 1998-305074	19980626
EP 887437	A3	20010411		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
US 6110544	A	20000829	US 1998-36776	19980309
CA 2238208	AA	19981226	CA 1998-2238208	19980521
BR 9802208	A	19990629	BR 1998-2208	19980624
CN 1210901	A	19990317	CN 1998-115073	19980625
JP 11071681	A2	19990316	JP 1998-179480	19980626
US 6432494	B1	20020813	US 2000-560851	20000428
PRAI US 1997-50821P	P	19970626		
US 1998-36776	A	19980309		

AB A method for depositing adherent metal **oxide**-based protective coatings (tetramethyldisiloxane) on glass, metal, and plastic substrates is carried out by passing a plasma gas through an arc plasma generator, injecting O and a reactive plasma towards a substrate positioned on the axis of the plasma plume in a vacuum chamber so that active species formed
within the plasma contact the surface of the substrate.

L1 ANSWER 15 OF 29 CA COPYRIGHT 2002 ACS
AN 1[illegible]:74348 CA
TI Deposition of **SiO2** films from novel alkoxysilane/O2 plasmas
AU Bogart, K. H. A.; Ramirez, S. K.; Gonzales, L. A.; Bogart, G. R.; Fisher, Ellen R.

CS Department of Chemistry, Colorado State University, Fort Collins, CO, 80523-1872, USA

SO Journal of Vacuum Science & Technology, A: Vacuum, Surfaces, and Films (1998), 16(6), 3175-3184

CODEN: JVTAD6; ISSN: 0734-2101

PB American Institute of Physics

DT Journal

LA English

AB The deposition of **SiO2** films from novel alkoxysilane/O2 rf plasmas has been investigated using tetraethoxysilane and the novel alkoxysilanes, triethoxysilane, tetramethoxysilane, and trimethoxysilane. We have demonstrated that high quality **SiO2** films can be deposited from each of these alkoxysilanes under similar conditions. For all precursors, film deposition rates decrease with the addn. of O2. Using 20:80 alkoxysilane/O2 plasmas, film deposition rate decreases with increasing substrate temp. and plasma power, while the **SiO2** film quality increases, as detd. by Fourier transform IR spectroscopy, ellipsometry, and wet etch rates. Substrate temp. appears to be the most influential deposition parameter, significantly affecting both compn. and properties of the deposited **SiO2** films. Measured apparent activation energies for **SiO2** deposition from alkoxysilane/O2 plasmas are neg. for all precursors. This suggests an adsorption/desorption-limited deposition mechanism controls film formation in all systems. Addnl. data for **SiO2** films deposited from the halogenated alkoxysilanes triethoxyfluorosilane and triethoxychlorosilane are also presented.

RE.CNT 43 THERE ARE 43 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L1 ANSWER 16 OF 29 CA COPYRIGHT 2002 ACS

AN 129:87819 CA

TI Low refractive index **SiO2** film and process for producing the same

IN Ichimura, Koji

PA Dai Nippon Printing Co., Ltd., Japan

SO Eur. Pat. Appl., 7 pp.

CODEN: EPXXDW

DT Patent

LA English

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 849374	A1	19980624	EP 1997-122211	19971217
	EP 849374	A3	19990630		
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
	JP 10230561	A2	19980902	JP 1997-315992	19971031
	US 2002001725	A1	20020103	US 1997-985904	19971205
PRAI	JP 1996-354141	A	19961218		
	JP 1997-315992	A	19971031		

AB **SiO2** films with low refractive indexes are described in which the films are doped with fluorine or a C1-4 alkyl group in which .gtoreq.1 of the H atoms may be replaced by a fluorine atom(s). The films may be used as antireflective films. Prodn. of the films entails CVD or **plasma CVD** from a starting material gas comprising a gas contg. a fluorine atom, a gas contg. a silicon atom and a C1-4 alkyl or a C1-4 alkyl group in which .gtoreq.1 of the H atoms may be replaced by a fluorine atom, and a gas contg. an oxygen atom. The doped **SiO2** films have a lower refractive index than undoped **SiO2** films.

L1 ANSWER 17 OF 29 CA COPYRIGHT 2002 ACS

AN 124:329136 CA

TI **Plasma** chemical vapor **deposition** (CVD) apparatus and manufacture of **oxide** film using it

IN Fudou, Yutaka; Hachitani, Masayuki; Oyama, Katsumi; Saito, Masayoshi; Honma, Yoshio
PA Hitachi Electronics Engineering Co., Ltd., Japan; Hitachi, Ltd.
SO Jpn. Kokai Tokkyo Koho, 7 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 10125669	A2	19980515	JP 1996-[illegible]044	19961022

AB The app. has an upper electrode connected with a high-frequency elec. power supply; a lower electrode connected with a high-frequency elec. power supply; inlets for reactant gases of Ar, SiH4, Et3SiOEt, Si(OEt)4, or Si(OMe)4 as Si sources and F, N2O or O2 as an oxidant; and an inlet for reductive gases of Ar and NH3 and/or N2H4. The oxide film is manufd. by using the above app. under applying high-frequency voltage to upper and lower electrodes at 27.0-111 MHz and 0.3-13.56 MHz, resp. The app. gives oxide films with less moisture absorption and is useful for manuf. of semiconductor devices.

L7 ANSWER 18 OF 29 CA COPYRIGHT 2002 ACS
AN 137:74449 CA
TI Plasma chemical vapor deposition apparatus and manufacture of semiconductor device
IN Saito, Masayoshi; Fudo, Yutaka; Oyama, Katsumi; Hachiya, Masayuki; Honma, Yoshio
PA Hitachi, Ltd., Japan; Hitachi Electronics Engineering Co., Ltd.
SO Jpn. Kokai Tokkyo Koho, 7 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 09167766	A2	19970624	JP 1995-[illegible]16	19951215

AB The plasma CVD app. is used by applying .gtoreq.2-MHz high-frequency elec. power to an upper electrode. A Si oxide film of the device is manufd. by using the app. from SiH4, TEOS, TRIES, or TRIMS. A F-contg. Si oxide film is manufd. by using the app. A Si oxide film with good moisture resistance and step coverage was obtained.

L7 ANSWER 19 OF 29 CA COPYRIGHT 2002 ACS
AN 127:12212 CA
TI Parallel planar electrode plasma chemical vapor deposition apparatus and manufacture of semiconductor devices
IN Saitou, Masayoshi; Kudo, Yutaka; Honma, Yoshio
PA Hitachi, Ltd., Japan; Hitachi Electronics Engineering Co., Ltd.
SO Jpn. Kokai Tokkyo Koho, 10 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 09134910	A2	19970520	JP 1995-292468	19951110

AB The app. has a mechanism to form an insulating film at .ltoreq.0.5 torr with an optional insulators or grounded conductor around the electrodes. A SiO2 film may be formed from a Si source gas and O2 or O-contg. gas, and an optional SiO2 film may be formed thereon by application or CVD using O3 in prepn. of semiconductor devices. A highly moisture-resistant SiO2 film is

L ANSWER 20 OF 29 CA COPYRIGHT 2002 ACS
AN 1[illegible]:197951 CA
TI Chemical vapor deposition apparatus and manufacture of semiconductor device
IN Saito, Masayoshi; Kudo, Yutaka; Pponma, Yoshio; Arai, Hisahiro; Na[illegible]saki, [illegible]ichi; Sato, Eiji; Hachitani, Masayuki; Suzuki, Shinpei; Iijima, Shinpei; Nakanishi, Shigehiko
PA Hitachi Ltd, Japan; Hitachi Electr Eng
SO Jpn. Kokai Tokkyo Koho, [illegible] pp.
CODEN: JKXXAF
DT Patent
LA Japanese
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
[illegible]10306676	A2	1998[illegible]	JP 1995-1[illegible]	1995[illegible]

AB The method of the device contg. an **insulator** film involves the following steps: (1) forming the 1st **SiO2** film on a substrate by CVD using silicon-alkoxide and O3 at 10-100 Torr, and (2) forming the 2nd **SiO2** film on the 1st **SiO2** film by CVD using silicon-alkoxide and O3 at a pressure of from 500 Torr to 1.5 atm. In step 1, the 1st **SiO2** film grows uniformly without being affected by its background even if the background is Si, metal, or **insulator**. The silicon-alkoxide is Si(OC2H5)4 (TEOS), for instance. The manuf. shows high step coverage. The (**plasma**) CVD app. for the method is also claimed.

L ANSWER 21 OF 29 CA COPYRIGHT 2002 ACS
AN 1[illegible]:48212 CA
TI Transparent, gas-barrier film
IN Fukuda, Shin; Yamazaki, Fumiharu; Fukuda, Nobuhiro
PA Mitsui Toatsu Chemicals, Japan
SO Jpn. Kokai Tokkyo Koho, 7 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 08281861	A2	1996[illegible]	JP 1995-8[illegible]	19950419

AB The title films, useful for substrates of liq. crystal displays, have Si **oxide** layers formed by **plasma** chem. vapor **deposition** of org. Si compds. in O atm. and other Si **oxide** layers obtained by heating the films coated with liqs. contg. polysilazanes. Thus, a polysilazane xylene soln. was coated on a polyether-sulfone film (Talpa 1000) and heated at 1[illegible].degree. for 1 h to give a layer, on which Si **oxide** layer was formed by **plasma** vapor **deposition** from a mixt. of tetramethyldisiloxane and O to give a test piece showing O permeability [illegible] and vapor permeability 0.[illegible] cm3/mm2/day.

L ANSWER 22 OF 29 CA COPYRIGHT 2002 ACS
AN 1[illegible]:289436 CA
TI Manufacture of silicon **oxide** film by **plasma** chemical vapor **deposition** for semiconductor device
IN Saito, Masayoshi; Pponma, Yoshio; Kudo, Yutaka
PA Hitachi Ltd, Japan; Hitachi Electr Eng
SO Jpn. Kokai Tokkyo Koho, 5 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE

PI JP 08236518 [redacted] 19960913 JP 1995-[redacted] 19951228

AB The Si **oxide** film contg. Si-H bonds is manufd. by **plasma** CVD of a Si alkoxide contg. Si-H bonds and an O source. The Si **oxide** film is useful as interlayer **insulating** films of semiconductor devices. An obtained Si **oxide** film showed high water resistance and good step coverage.

L ANSWER 23 OF 29 CA COPYRIGHT 2002 ACS
AN 124:[illegible] CA
TI Transparent gas-barrier laminated packaging films
IN Sasaki, Noboru; Yoshikawa, Hitoshi; Miyamoto, Takashi
PA Toppan Printing Co Ltd, Japan
SO Jpn. Kokai Tokkyo Koho, 5 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 08072193	A2	19960319	JP 1994-[illegible]	19940908
JP 3070404	B2	20000731		

AB Title films with good mech. strength, useful for packaging of foods, drugs, fine electronic parts, etc., comprise a transparent gas-barrier of a metal **oxide** thin layer and a C-contg. Si **oxide** thin layer, coated on one side of a transparent polymer base film. Thus, a 12-.mu.m thick PET film was coated with a 50-nm thick MgO film by vacuum vapor deposition and overcoated with a 30-nm C-contg. Si **oxide** film by **plasma**-excited chem. vapor **deposition** using tetramethylenedisilmethane (TSIC), O, and He. The obtained film was gravure-printed and dry-laminated with an undrawn polypropylene film via an urethane adhesive to show O permeation rates 0.18 and 0.77 mL/m2/day before and after dry-lamination, resp.

L ANSWER 24 OF 29 CA COPYRIGHT 2002 ACS
AN 114:73946 CA
TI Manufacture of semiconductor devices
IN Nobo, Tooru; Ppnma, Tetsuya
PA Nippon Electric Co, Japan
SO Jpn. Kokai Tokkyo Koho, 15 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 07273194	A2	19951020	JP 1994-[illegible]	19940330
JP 2757767	B2	19980525		

AB The title process comprises formation of a lower **insulating** film having a smooth surface on a Si substrate which has semiconductor devices thereon, sequential formation of a no. of lower wiring layers thereon, **plasma CVD** of a 1st **SiO2** film on the lower wiring layers, CVD of a 2nd **SiO2** film from trialkoxysilane or silsesquioxane hydride ((HSiO3/2 2m, m = 4-10) inert gas bubbling-supplied and mixed with O3 (or O2), formation of a spin-on-glass film from an org. source and etching back thereof for formation of an even surface over the 2nd **SiO2** film, **plasma CVD** of a 3rd **SiO2** film thereon, formation of a no. of through-holes through the 3rd, the 2nd, and the 1st **SiO2** film, and sequential formation of a no. of upper wiring layers. SiH4 with N2O, or Si(EtO)4, trialkoxysilane, or silsesquioxane hydride mixed with O2 may be used for the 1st and the 3rd **SiO2** film. The interlayer **insulating** film prepd. contains H2O at an amt. less than that in a film from Si(EtO)4 and O3, is superior in step coverage, prevents

upper wiring layer[redacted]nd hence variation of the th[redacted]ld voltage, e.g.,
...
MOS transistor can be suppressed.

L... ANSWER 25 OF 29 CA COPYRIGHT 2002 ACS
AN ...:356901 CA
TI Method for depositing a **dielectric** and/or conductive material on a substrate
IN ...tephan, Ronan; Callebert, Franck
PA Compagnie Europeenne de Propulsion Electric Micro [illegible], Fr.
SO PCT Int. Appl., 37 pp.
CODEN: PIXXD2
DT Patent
LA French
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9627293	A1	19960912	WO 1996-FR[illegible]	19960304
W: CA, FI, JP, KR, US				
RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
FR 2718154	A1	19951006	FR 1994-[illegible]	19940405
FR 2718154	B1	19960628		
EP 1994-3962		19941215		

PRAI MARPAT 123:356901
AB A method is described for depositing a dielec. and/or conductive layer on a substrate, wherein the dielec. layer is deposited in a reactor through the polymn. of components resulting from the decompn. of an organosilicon or organogermanium gas by a remote nitrogen **plasma**; the conductive layer is **deposited** in said reactor through the **deposition** of conductive components resulting from the dissocn. of a reactive component precursor gas by said remote nitrogen plasma; said substrate is advanced so that the same portion of the substrate successively faces at least one dielec. layer deposition cavity and at least one conductive layer deposition cavity, two successive dielec. [illegible] within cavities being supplied with a remote nitrogen **plasma** by a single discharge cavity, and two successive conductive layer **deposition** cavities being supplied with a remote nitrogen plasma by a single discharge cavity; and unreacted gases are removed via pumping cavities towards a vacuum pump, two successive pumping cavities being provided on each side of a dielec. layer deposition cavity or of a conductive layer deposition cavity.

L... ANSWER 26 OF 29 CA COPYRIGHT 2002 ACS
AN ...:185730 CA
TI Forming an **insulating** film
IN Ikeda, Kazuo; Tokumasu, Noboru; Yuama, Yoshiaki
PA Tokyo Sales Co., Inc, Japan; Alcan-Tech Co., Inc.; Semiconductor Process Laboratory Co., Ltd.
SO Eur. Pat. Appl., 25 pp.
CODEN: EPXXDW
DT Patent
LA English
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 664560	A2	19950726	EP 1995-[illegible]	19950117
EP 664560	A3	19971122		
JP 07211712	A2	19950811	JP 1994-[illegible]	19940125
JP 2833600	B2	1998[illegible]		
US 5554570	A	19960910	US 1995-[illegible]	19950109

PRAI JP 1994-6381 19940125
MARPAT 123:185730
AB A Si-contg. **insulating** film is formed by **plasma** CVD. Objects of the present invention are to form, using a safe

reaction gas, an **insulating** film which is dense, [illegible] org. residue such as
step coverage, includes a small amt. of moisture and org. residue such as
C, and conforms to Si **oxide** films formed by thermal CVD, and
[illegible] to control the refractive index and stress of the **insulating**
film. A gas mixt. containing an org. compd. having Si-H bonds and an
oxidizing gas is formed into a plasma, and the **insulating** film is formed on a substrate.

AN ANSWER 27 OF 29 CA COPYRIGHT 2002 ACS
AC 122:318713 CA
TI Solar cell sheets
IN Fukuda, Shin; Ashida, Yoshinori; Fukuda, Nobuhiro
PA Mitsui Toatsu Chemicals, Japan
SO Jpn. Kokai Tokkyo Koho, 7 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 07174378	A2	19950711	JP 1993-317178	19931216

AB The solar cell sheets have amorphous Si solar cells formed on a gas barrier film. The film is preferably a polymer film laminated with SiO2, which may be formed by **plasma CVD** from an org. Si compd. and O.

AN ANSWER 28 OF 29 CA COPYRIGHT 2002 ACS
AC 122:304204 CA
TI **Plasma**-enhanced chemical vapor **deposition** of SiO2 using novel alkoxysilane precursors
AU Bogart, K. H. A.; Dalleska, N. F.; Bogart, G. R.; Fisher, Ellen R.
CS Dep. Chem., Colorado State Univ., Fort Collins, CO, 80523, USA
SO Journal of Vacuum Science & Technology, A: Vacuum, Surfaces, and Films (1995), 13(2), 476-80
CODEN: JVTAD6; ISSN: 0734-2101
PB American Institute of Physics
DT Journal
LA English
AB The authors have deposited SiO2 films on silicon and NaCl substrates from TEOS and three novel alkoxysilanes, viz. triethoxysilane, tetramethoxysilane, and trimethoxysilane. The films from all four alkoxysilanes have FTIR spectra and refractive indexes similar to those of SiO2, and deposition rates are reasonably fast, approx.1360 Å/min for TEOS. As the size of the alk. substituent decreases, the amt. of hydrocarbon incorporation in the films decreases. Films deposited with the trialkoxysilanes show significant amts of Si-H bonding in their FTIR spectra, while those deposited from the tetraalkoxysilanes do not. The methoxysilanes give films with a greater SiO/CH3 ratio but a slower deposition rate.

AN ANSWER 29 OF 29 CA COPYRIGHT 2002 ACS
AC 121:289857 CA
TI Gas barrier type transparent electroconductive laminate for liquid crystal display
IN Fukuda, Shin; Fukuda, Nobuhiro
PA Mitsui Toatsu Chemicals, Japan
SO Jpn. Kokai Tokkyo Koho, 13 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE

[illegible] 10099536 [illegible] JP [illegible] 19921211
DE 3118339 20011219
PRAI DE 1992-211362 A1 19921117
AB The title laminate comprises on a transparent polymeric film substrate a
[illegible] **oxide** layer and a transparent electroconductive layer,
wherein the Si **oxide** layer is formed by low pressure
plasma CVD using an org. Si compd. and O2. The laminate
shows superior transparency and flexibility, and is useful for liq.
crystal display to repel water vapor and O2.

[illegible] sam

L1 ANSWER 1 OF 29 CA COPYRIGHT 2002 ACS
[illegible] (Electric Phenomena)
Section cross-reference(s): 38
TI Deposition process based on organosilicon precursors in **dielectric**
barrier discharges at atmospheric pressure--a comparison
ST **plasma CVD** barrier discharge methyldisiloxane TEOS
mechanism
IT Streamer discharge
(deposition process based on organosilicon precursors in dielec.
barrier discharges)
IT Polysiloxanes, properties
RL: BEP (Physical, engineering or chemical process); BPR (Properties);
PHY
(Physical process); SPN (Synthetic preparation); TEM (Technical or
engineered material use); PREP (Preparation); PROC (Process); USES (Uses
(deposition process based on organosilicon precursors in dielec.
barrier discharges)
[illegible], properties
RL: BPR (Properties); TEM (Technical or engineered material use); USES
(Uses)
(deposition process based on organosilicon precursors in dielec.
barrier discharges)
IT Polymerization
Vapor deposition process
(**plasma; deposition** process based on organosilicon
precursors in dielec. barrier discharges)
IT 64-17-5P, Ethanol, preparation 74-82-8P, Methane, preparation
74-84-0P, Ethane, preparation 74-85-1P, Ethylene, preparation
74-86-2P, Acetylene, preparation 75-76-3P, Tetramethylsilane
993-07-7P, Trimethylsilane 1438-82-0P, Pentamethyldisiloxane
30110-74-8P, Tetramethyldisiloxane
RL: BYP (Byproduct); PREP (Preparation)
(deposition process based on organosilicon precursors in dielec.
barrier discharges)
IT 7440-37-1, Argon, uses 7440-59-7, Helium, uses 7727-37-9, Nitrogen,
uses
RL: NUU (Other use, unclassified); USES (Uses)
(deposition process based on organosilicon precursors in dielec.
barrier discharges)
IT [illegible]-10-4, Tetraethoxysilane 107-46-0, Hexamethyldisiloxane
RL: NUU (Other use, unclassified); RCT (Reactant); RACT (Reactant or
reagent); USES (Uses)
(deposition process based on organosilicon precursors in dielec
barrier discharges)
IT 1344-28-1, Alumina, properties 12047-27-7, Barium titanate, properties
RL: PRP (Properties); TEM (Technical or engineered material use); USES
(Uses)
(deposition process based on organosilicon precursors in dielec.
barrier discharges)

L1 ANSWER 2 OF 29 CA COPYRIGHT 2002 ACS
AN [illegible]230016-40

[illegible]
76-1 (Electric Phenomena)
Section cross-reference(s): 75
TI Device for the production of barrier layers for gaseous and/or liquid substances on substrates, in particular plastic substrates, by means of a **plasma**-enhanced chemical vapor **deposition** in a vacuum treatment chamber
ST **plasma** vapor **deposition** barrier layer
IT Diffusion barrier
Semiconductor materials
(device for prodn. of barrier layers for gaseous and/or liq. substances on substrates, in particular plastic substrates, by means of a **plasma**-enhanced chem. vapor **deposition** in a vacuum treatment chamber)
IT Vapor deposition process
(plasma; device for prodn. of barrier layers for gaseous and/or liq. substances on substrates, in particular plastic substrates, by means of a **plasma**-enhanced chem. vapor **deposition** in a vacuum treatment chamber)
IT Siloxanes (nonpolymeric)
RL: RCT (Reactant); RACT (Reactant or reagent)
(vapor deposition precursor; device for prodn. of barrier layers for gaseous and/or liq. substances on substrates, in particular plastic substrates, by means of a **plasma**-enhanced chem. vapor **deposition** in a vacuum treatment chamber)
IT 1344-28-1, Alumina, uses 7429-90-5, Aluminum, uses 7440-21-3, Silicon, uses 7631-86-9, Silica, uses
RL: TEM (Technical or engineered material use); USES (Uses)
(device for prodn. of barrier layers for gaseous and/or liq. substances on substrates, in particular plastic substrates, by means of a **plasma**-enhanced chem. vapor **deposition** in a vacuum treatment chamber)
IT 107-46-0, Hexamethyldisiloxane **30110-74-8**, Tetramethyldisiloxane
RL: RCT (Reactant); RACT (Reactant or reagent)
(vapor deposition precursor; device for prodn. of barrier layers for gaseous and/or liq. substances on substrates, in particular plastic substrates, by means of a **plasma**-enhanced chem. vapor **deposition** in a vacuum treatment chamber)

L? ANSWER 3 OF 1? CA COPYRIGHT 2002 ACS
IC ICM H01L021-316
CC 66-4 (Surface Chemistry and Colloids)
Section cross-reference(s): 76
TI Method to restore hydrophobicity in **dielectric** films and materials
ST restore hydrophobicity silica dielec film surface modification
IT Alcohols, processes
RL: PEP (Physical, engineering or chemical process); RCT (Reactant); PROC (Process); RACT (Reactant or reagent)
(amino, etchant; method to restore hydrophobicity in dielec. films and materials)
IT Polishing
(chem.-mech.; method to restore hydrophobicity in dielec. films and materials)
IT Sputtering
(copper; method to restore hydrophobicity in dielec. films and materials)
IT Acids, processes
Alcohols, processes
Amides, processes
Amines, processes
Bases, processes

RL: PEP (Physical, engineering or chemical process); RCT (Reactant); PROC (Process); PACT (Reactant or reagent)
etchant; method to restore hydrophobicity in dielec. films and materials)
Silsesquioxanes
RL: PEP (Physical, engineering or chemical process); PROC (Process)
film; method to restore hydrophobicity in dielec. films and materials)
IT Dielectric films
Semiconductor device fabrication
method to restore hydrophobicity in dielec. films and materials)
IT Aging
oxygen; method to restore hydrophobicity in dielec. films and materials)
IT Vapor deposition process
plasma, silicon nitride; method to restore hydrophobicity in dielec. films and materials)
IT Plasma
(surface treatment; method to restore hydrophobicity in dielec. films and materials)
IT Amines, processes
RL: PEP (Physical, engineering or chemical process); RCT (Reactant); PROC (Process); PACT (Reactant or reagent)
(triamines, etchant; method to restore hydrophobicity in dielec. films and materials
IT 12033-89-5, Silicon nitride, processes
RL: PEP (Physical, engineering or chemical process); PROC (Process)
PECVD; method to restore hydrophobicity in dielec. films and materials)
IT 7440-25-7, Tantalum, processes
RL: PEP (Physical, engineering or chemical process); PROC (Process)
barrier liner film; method to restore hydrophobicity in dielec. films and materials)
IT 7440-50-8, Copper, processes
RL: PEP (Physical, engineering or chemical process); PROC (Process)
(copper seed layer; method to restore hydrophobicity in dielec. films and materials)
IT 60-00-4, processes 64-17-5, Ethanol, processes 64-19-6, Formic acid, processes 64-19-7, Acetic acid, processes 67-63-0, 2-Propanol, processes 68-12-2, Dimethylformamide, processes 75-59-2, Tetramethylammonium hydroxide 100-36-7, N,N-Diethylethylenediamine 107-15-3, Ethylenediamine, processes 111-40-0, Triethylenetriamine 121-44-8, Triethylamine, processes 127-19-5, Dimethylacetamide 141-43-5, Ethanolamine, processes 872-50-4, processes 1336-21-6, Ammonium hydroxide 7664-38-2, Phosphoric acid, processes 7664-39-3, Hydrofluoric acid, processes 7664-93-9, Sulfuric acid, processes 7719-49-8, Hydroxyl amine, processes 10581-12-1, Tetramethylammonium acetate 13125-01-8, Ammonium fluoride 14475-38-8, Silanol
RL: PEP (Physical, engineering or chemical process); RCT (Reactant); PROC (Process); PACT (Reactant or reagent)
etchant; method to restore hydrophobicity in dielec. films and materials)
IT 7697-37-2, Nitric acid, processes
RL: NUU (Other use, unclassified); PEP (Physical, engineering or chemical process); PROC (Process); USES (Uses)
(in silica precursor; method to restore hydrophobicity in dielec. films and materials)
IT 174794-67-3, Amberjet 4200
RL: CAT (Catalyst use); USES (Uses)
(method to restore hydrophobicity in dielec. films and materials
IT 345809-99-4, EKC 630
RL: NUU (Other use, unclassified); PEP (Physical, engineering or chemical process); PROC (Process); USES (Uses)
(method to restore hydrophobicity in dielec. films and materials
IT 7631-86-9, Silica, processes

RL: PEP (Physical, engineering or chemical process); PROC (Process); USES (Uses)
(nanoporous film; method to restore hydrophobicity in dielec. films and materials)

IT 75-79-6, Methyltrichlorosilane 10025-78-2, Trichlorosilane
RL: PEP (Physical, engineering or chemical process); RCT (Reactant); PROC (Process); RACT (Reactant or reagent)
(nanoporous silica film precursor; method to restore hydrophobicity in dielec. films and materials)

IT 74-82-8, Methane, processes 1333-74-0, Hydrogen, processes 7727-37-9, Nitrogen, processes 7782-41-4, Fluorine, processes 7782-44-7, Oxygen, processes
RL: PEP (Physical, engineering or chemical process); RCT (Reactant); PROC (Process); RACT (Reactant or reagent)
(plasma treatment of silica film; method to restore hydrophobicity in dielec. films and materials)

IT 7440-37-1, Argon, processes
RL: NUU (Other use, unclassified); PEP (Physical, engineering or chemical process); PROC (Process); USES (Uses)
(silane plasma; method to restore hydrophobicity in dielec. films and materials)

IT 993-94-9, Methylsilane
RL: PEP (Physical, engineering or chemical process); RCT (Reactant); PROC (Process); RACT (Reactant or reagent)
(silane plasma; method to restore hydrophobicity in dielec. films and materials)

IT 78-10-4, Tetraethoxysilane
RL: PEP (Physical, engineering or chemical process); RCT (Reactant); PROC (Process); RACT (Reactant or reagent)
(silica precursor; method to restore hydrophobicity in dielec. films and materials)

IT 96-22-0, 3-Pentanone
RL: NUU (Other use, unclassified); PEP (Physical, engineering or chemical process); PROC (Process); USES (Uses)
(solvent for surface modifier; method to restore hydrophobicity in dielec. films and materials)

IT 112-35-6, Triethyleneglycol monomethyl ether
RL: NUU (Other use, unclassified); PEP (Physical, engineering or chemical process); PROC (Process); USES (Uses)
(solvent in silica precursor; method to restore hydrophobicity in dielec. films and materials)

IT 110-43-0, 2-Heptanone
RL: NUU (Other use, unclassified); PEP (Physical, engineering or chemical process); PROC (Process); USES (Uses)
(surface modifier solvent; method to restore hydrophobicity in dielec. films and materials)

IT 4253-34-3, Methyltriacetoxysilane
RL: MOA (Modifier or additive use); PEP (Physical, engineering or chemical process); RCT (Reactant); PROC (Process); RACT (Reactant or reagent); USES (Uses)
(surface modifier; method to restore hydrophobicity in dielec. films and materials)

IT 75-77-4, Trimethylchlorosilane, processes 75-78-5, Dimethyldichlorosilane 78-62-6, Dimethyldiethoxysilane 107-46-0, Hexamethyldisiloxane 597-52-4, Triethylsilanol 791-31-1, Triphenylsilanol 947-42-2, Diphenylsilanediol 993-07-7, Trimethylsilane 998-30-1, Triethoxysilane 999-07-9, Hexamethyldisilazane 1066-40-6, Trimethylsilanol 1111-74-6, Dimethylsilane 1112-39-6, Dimethyldimethoxysilane 1185-55-3, Methyltrimethoxysilane 1825-61-2, Trimethylmethoxysilane 1825-62-3, Trimethylethoxysilane 2031-67-6, Methyltriethoxysilane 2182-66-3, Diacetoxydimethylsilane 2345-33-2 **2487-90-3**, Trimethoxysilane 2754-27-0, Acetoxytrimethylsilane 5683-31-8D, 2-Propynoic acid,

-- trimethylsilyl[illegible] ester, uses [illegible] [illegible]
-- Trimethylsilyl[illegible]etamide 10042-54-1, Phenyltri[illegible]etoxysilane
18156-74-6, n-(Trimethylsilyl imidazole [illegible], tert-
Butyldimethylsilanol [illegible] 5795-58-6, Hexamethyltrisilazane
IT: PEP (Physical, engineering or chemical process); RACT (Reactant or reagent); PROC (Process); RACT (Reactant or reagent)
surface modifier; method to restore hydrophobicity in dielec. films and materials)

L7 ANSWER 4 OF 29 CA COPYRIGHT 2002 ACS
IC ICM H01L021-316
ICS C23C016-40
NCL 438/778.000
CC 76-3 (Electric Phenomena)
Section cross-reference(s): 35
TI **Plasma CVD** of **insulator** film and semiconductor device
IT **plasma CVD insulator** film semiconductor device
IT **Dielectric** films
Semiconductor device fabrication
Semiconductor devices
plasma CVD of **insulator** film and semiconductor device
IT Siloxanes (nonpolymeric
RL: NUU (Other use, unclassified); USES (Uses)
plasma CVD of **insulator** film and semiconductor device
IT Vapor deposition process
plasma; plasma CVD of **insulator** film and semiconductor device
IT [illegible]-40-8, Methane, uses 74-84-0, Ethane, uses 74-85-1, Ethylene, uses [illegible]-70-3, Tetramethylsilane 78-10-4, Tetraethoxysilane 124-38-9, [illegible]
dioxide, uses [illegible]-[illegible]-2, Fluorotrimethoxysilane 756-67-2 [illegible]-16-7, Tetraethylsilane 681-84-5, Tetramethoxysilane 994-49-0 [illegible]-10-1, Triethoxysilane 2970-88-9 **2487-90-3**, Trimethoxysilane 2973-28-7 3277-26-7 7732-18-5, Water, uses [illegible]-44-7, Oxygen, uses 10024-97-2, Nitrogen **oxide** (N2O), uses [illegible]-10-7 [illegible]-13-3, Fluorotrimethoxysilane 72453-92-3
RL: NUU (Other use, unclassified); USES (Uses)
plasma CVD of **insulator** film and semiconductor device

L7 ANSWER 5 OF 29 CA COPYRIGHT 2002 ACS
IC ICM H01L021-316
ICS C23C016-40
NCL 438/778.000
CC 76-10 (Electric Phenomena)
Section cross-reference(s): 35, 38
TI Silicon compound **dielectric** film plasma forming method and semiconductor device
IT **plasma CVD** polysiloxane dielec film; alkyldisiloxane **plasma CVD** dielec film; cyclosiloxane **plasma** CVD dielec film
IT Silsesquioxanes
RL: PEP (Physical, engineering or chemical process); SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); PROC (Process); USES (Uses)
Me; silicon compd. dielec. film plasma forming method and semiconductor device)
IT Fluoride glasses
Silicate glasses
RL: PEP (Physical, engineering or chemical process); SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); PROC (Process); USES (Uses)
fluorosilicate; silicon compd. dielec. film plasma forming method and semiconductor device)
IT Silsesquioxanes
RL: PEP (Physical, engineering or chemical process); SPN (Synthetic

(Preparation); PROC (Process); USES (Uses
(hydrogen; silicon compd. dielec. film plasma forming method and semiconductor device
IT Polymerization
Vapor deposition process
(plasma; silicon compd. dielec. film plasma forming method and semiconductor device)
IT **Dielectric** films
(oxidizing agents
silicon compd. dielec. film plasma forming method and semiconductor device)
IT Cyclosiloxanes
Noble gases, processes
Siloxanes (nonpolymeric)
RL: NUN (Other use, unclassified); PEP (Physical, engineering or chemical process); PROC (Process); USES (Uses
silicon compd. dielec. film plasma forming method and semiconductor device)
IT Polysiloxanes, processes
RL: PEP (Physical, engineering or chemical process); SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); PROC (Process); USES (Uses
(silicon compd. dielec. film plasma forming method and semiconductor device)
IT 67-56-1, Methanol, processes 75-76-3, Tetramethylsilane 78-10-4, Tetraethoxysilane 107-46-0, Hexamethyldisiloxane 124-38-9, Carbon **dioxide**, processes 556-67-2, Octamethylcyclotetrasiloxane 681-84-5, Tetramethoxysilane 994-49-0, Hexaethyldisiloxane 998-30-1, Triethoxysilane 2370-88-9, Tetramethylcyclotetrasiloxane **2487-90-3**, Trimethoxysilane 3277-26-7, 1,1,3,3-Tetramethyldisiloxane 7440-37-1, Argon, processes 7440-59-7, Helium, processes 7664-41-7, Ammonia, processes 7732-18-5, Water, processes 7782-44-7, Oxygen, processes 7803-62-5, Silane, processes 10024-97-2, Dinitrogen **oxide**, processes 16066-10-7, Tetraethylcyclotetrasiloxane
RL: NUN (Other use, unclassified); PEP (Physical, engineering or chemical process); PROC (Process); USES (Uses)
(silicon compd. dielec. film plasma forming method and semiconductor device)

L7 ANSWER 6 OF 29 CA COPYRIGHT 2002 ACS
IC ICM F21V003-04
ICS F21V007-22; C09K103-18; G02B001-10; C23C016-40; C03C017-25
CC 57-1 (Ceramics)
Section cross-reference(s): 38, 74
TI Photocatalytic coating for self-cleaning automotive headlights
ST automotive headlight photocatalytic cleaning semiconductor coating
IT Semiconductor materials
(coating with; photocatalytic coating with semiconductor for self-cleaning automotive headlights)
IT Acrylic polymers, uses
Glass, uses
Plastics, uses
Polycarbonates, uses
RL: DEV (Device component use); USES (Uses)
(headlight, coating of; photocatalytic coating with semiconductor for self-cleaning automotive headlights)
IT Electric lamps
(headlights, self-cleaning; photocatalytic coating with semiconductor for self-cleaning automotive headlights)
IT Catalysts
(photochem., coating with; photocatalytic coating with semiconductor for self-cleaning automotive headlights)
IT 2530-83-8, Z-6040
RL: MOA (Modifier or additive use); USES (Uses)

binder, coating contg.; photocatalytic coating with semiconductor for self-cleaning automotive headlights)
IT 4[illegible]-36-3, Tetraethoxytitanium **30110-74-8**, Tetramethyl
[illegible]ilikmane
RL: MOA (Modifier or additive use); USES (Uses)
(coating contg. **plasma-deposited**; photocatalytic coating with semiconductor for self-cleaning automotive headlights)
IT [illegible]7-70-0, Anatase 7631-86-9, Silica, uses
RL: MOA (Modifier or additive use); USES (Uses)
(colloidal, coating contg.; photocatalytic coating with semiconductor for self-cleaning automotive headlights)
IT 9003-53-6, Polystyrene 9003-56-9 25667-42-9
RL: DEV (Device component use); USES (Uses)
headlight; photocatalytic coating with semiconductor for self-cleaning automotive headlights

L ANSWER 7 OF 29 CA COPYRIGHT 2002 ACS
IC ICM G02B001-11
ICS B32B007-02
CC 76-11 (Optical, Electron, and Mass Spectroscopy and Other Related Properties)
IT Antireflection films
RT antireflection film silica titania **plasma CVD**
RT Multilayer films
antireflection film
RT Vapor deposition process
(plasma; antireflection film)
IT 7631-86-9, Silica, uses 12403-67-7, Titania, uses
RL: DEV (Device component use); USES (Uses)
(antireflection film)
IT 107-46-0, Hexamethyldisiloxane 546-68-9, Titanium tetraisopropoxide **30110-74-8**, Tetramethyl disiloxane
RL: PEP (Physical, engineering or chemical process); PROC (Process)
(antireflection film)

IT ANSWER 8 OF 29 CA COPYRIGHT 2002 ACS
IC ICM H01L021-312
ICS H01L021-768; H01L023-532; H01L021-316
CC 76-3 (Electric Phenomena)
TI Method and apparatus for forming a porous **SiO2** interlayer **insulating** film
RT porous silica film interlayer **insulator** film; plasma CVD alkoxysilane silica porous film; degassing silica porous film
RT Annealing
Degassing
Oxidizing agents
(for forming porous silica interlayer **insulating** film
IT **Dielectric** films
method and app. for forming porous silica interlayer **insulating** film)
IT Metals, processes
RL: DEV (Device component use); PEP (Physical, engineering or chemical process); PROC (Process); USES (Uses)
(method and app. for forming porous silica interlayer **insulating** film for)
IT Vapor deposition apparatus
(plasma; for forming porous silica interlayer **insulating** film)
IT Vapor deposition process
(plasma; method and app. for forming porous silica interlayer **insulating** film)
IT 7[illegible]-10-4 998-30-1, Triethoxysilane 2171-96-2, Methoxysilane **2487-90-3**, Trimethoxysilane 5314-52-3, Dimethoxysilane 7[illegible]-37-1, Argon, uses 7440-59-7, Helium, uses 7782-44-7, Oxygen, uses

[illegible]-15-6, Ozone, uses [illegible], Silane, [illegible]-methoxymethoxysilane-
diethoxysilane [illegible]-45-7, Tiborane [illegible]-methoxymethoxysilane-
[illegible]-02-8 [illegible]-6-7
RL: NUU (Other use, unclassified ; USES (Uses
for forming porous silica interlayer **insulating** film
IT 7440-42-8D, Boron, compds., processes
RL: NUU (Other use, unclassified ; PEP (Physical, engineering or chemical
process ; PROC (Process ; USES (Uses)
for forming porous silica interlayer **insulating** film
IT [illegible]-38-9P, Carbon **dioxide**, processes 7732-18-5, Water,
processes
RL: PEP (Physical, engineering or chemical process ; PNU (Preparation,
unclassified ; REM (Removal or disposal ; PREP (Preparation ; PROC
(Process)
(for forming porous silica interlayer **insulating** film
IT 7631-86-9P, Silica, processes
RL: PEP (Physical, engineering or chemical process ; SPN (Synthetic
preparation); TEM (Technical or engineered material use); PREP
(Preparation ; PROC (Process ; USES (Uses
(method and app. for forming porous silica interlayer
insulating film)
IT [illegible]333-74-0, Hydrogen, processes
RL: NUU (Other use, unclassified ; PEP (Physical, engineering or chemical
process); PROC (Process ; USES (Uses)
plasma; for forming porous silica interlayer **insulating**
film)
IT 7440-42-8, Boron, uses
RL: MOA (Modifier or additive use); USES (Uses)
silica dopant; for forming porous silica interlayer **insulating**
film)

L ANSWER 9 OF 29 CA COPYRIGHT 2002 ACS
AN [illegible] (Industrial Inorganic Chemicals)
TI Overall kinetics of SiOx remote-**PECVD** using different
organosilicon monomers
KW Silicon **oxide plasma** CVD; organosilicon
monomer silicon **oxide plasma** CVD
IT Reaction kinetics
(overall kinetics of SiOx remote-**plasma** enhanced **CVD**
using different organosilicon monomers
IT Vapor deposition process
(**plasma**; overall kinetics of SiOx remote-**plasma**
enhanced **CVD** using different organosilicon monomers)
IT 78-07-9, Ethyltriethoxysilane 78-10-4 78-62-6, Dimethyldiethoxysilane
107-46-0, Hexamethyldisiloxane 681-84-5 [illegible]-[illegible]-3 1825-61-2,
Trimethylmethoxysilane 1825-62-3, Trimethylethoxysilane
3011O-74-8, Tetramethyldisiloxane
RL: RCT (Reactant ; RACT (Reactant or reagent
(overall kinetics of SiOx remote-**plasma** enhanced **CVD**
using different organosilicon monomers)
IT 7631-86-9DP, Silicon **oxide**, nonstoichiometric
RL: SPN (Synthetic preparation); PREP (Preparation)
(overall kinetics of SiOx remote-**plasma** enhanced **CVD**
using different organosilicon monomers)

L ANSWER 10 OF 29 CA COPYRIGHT 2002 ACS
IC ICM C23C016-30
ICS C23C014-34
CC 73-11 (Optical, Electron, and Mass Spectroscopy and Other Related
Properties)
Section cross-reference(s): 42, 75
TI Methods for applying wear protective coating systems with optical
properties on surfaces
KW Composite optical wear resistant coating two step deposition
IT Coating materials
(UV-absorbing; application of wear-resistant protective coating
[illegible]

with optical properties to surfaces)
IT Coating materials
(UV-resistant; application of wear-resistant protective coating
systems with optical properties to surfaces)
IT Coating materials
(abrasion-resistant; application of wear-resistant protective coating
systems with optical properties to surfaces)
IT Sputtering
(application of wear-resistant protective coating systems with optical
properties to surfaces)
IT Halides
Carbides
Fluorides, uses
Nitrides
Selenides
Sulfides
Uses
RL: DEV (Device component use); PEP (Physical, engineering or chemical
process); PROC (Process); USES (Uses)
(application of wear-resistant protective coating systems with optical
properties to surfaces)
IT **Oxides** (inorganic), uses
RL: NUU (Other use, unclassified); RCT (Reactant); RACT (Reactant or
reagent); USES (Uses)
(application of wear-resistant protective coating systems with optical
properties to surfaces)
IT Vapor deposition process
(phys.; application of wear-resistant protective coating systems with
optical properties to surfaces)
IT Vapor deposition process
(plasma; application of wear-resistant protective coating systems with
optical properties to surfaces)
IT Coating materials
(scratch-resistant; application of wear-resistant protective coating
systems with optical properties to surfaces)
IT 74-82-8, Methane, uses 74-84-0, Ethane, uses 74-85-1, Ethylene, uses
74-98-6, Acetylene, uses 75-76-3, Tetramethylsilane 78-10-4
(Ti(OEt)4), Tetramethoxysilane 107-46-0, Hexamethyldisiloxane 999-97-3,
Hexamethyldisilazane 1185-55-3 1450-14-2, Hexamethyldisilane
30110-74-8, Tetramethyldisiloxane 30110-75-9,
Divinyltetramethyldisiloxane
RL: NUU (Other use, unclassified); RCT (Reactant); RACT (Reactant or
reagent); USES (Uses)
(application of wear-resistant protective coating systems with optical
properties to surfaces)

L1 ANSWER 11 OF 29 CA COPYRIGHT 2002 ACS
CC 76-3 (Electric Phenomena)
TI **Plasma** enhanced chemically vapor **deposited** thin films
for microelectromechanical systems applications with tailored optical,
thermal, and mechanical properties
KW **plasma** enhanced chem vapor **deposition** thin film;
microelectromech system chem vapor deposition thin film
IT Optical detectors
(IR, bolometers; fabrication of microbridge materials optimized for
room temp. IR microbolometers
IT Membranes, nonbiological
(deposition of thin films from tetramethyldisiloxane and oxygen for
use
as microbolometer membrane)
IT Superconductor microbridges
(fabrication of microbridge materials optimized for room temp. IR
microbolometers)
IT Micromachines

Semiconductor films
plasma enhanced chem. vapor **deposited** thin films for microelectromech. systems applications with tailored optical, thermal, and mech. properties

Vapor deposition process
plasma; **plasma** enhanced chem. vapor **deposited** thin films for microelectromech. system applications with tailored optical, thermal, and mech. properties

7782-44-7, Oxygen, reactions **30110-74-8**, Tetramethyldisiloxane
RL: RCT (Reactant; RACT (Reactant or reagent)
deposition of thin films from tetramethyldisiloxane and oxygen

ANSWER 12 OF 29 CA COPYRIGHT 2002 ACS
IC ICM C23C016-44
ICS C08J007-04; C09D183-04; C23C016-24
NCL 427/8 (Pharmaceuticals
CC 63-5 (Pharmaceuticals); 39, 42
Method for coating elastomer components
coating elastomer component vapor deposition medical
Drug delivery systems
infusions; method for coating elastomer components for medical uses for friction redn.
Drug delivery systems
injections; method for coating elastomer components for medical uses for friction redn.
Apparatus
Coating materials
(medical; method for coating elastomer components for medical uses for friction redn.)
Drug delivery systems
Films
Injectors
Medical goods
Spray atomizers
(method for coating elastomer components for medical uses for friction redn.)
Siloxanes (nonpolymeric
RL: PEP (Physical, engineering or chemical process); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)
(method for coating elastomer components for medical uses for friction redn.)
Friction
sliding; method for coating elastomer components for medical uses for friction redn.
Friction
static friction; method for coating elastomer components for medical uses for friction redn.
107-46-0, Hexamethyldisiloxane 7631-86-9, Silicon **dioxide**, biological studies **30110-74-8**, Tetramethyldisiloxane
RL: PEP (Physical, engineering or chemical process); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)
(method for coating elastomer components for medical uses for friction redn.)
1333-74-0, Hydrogen, biological studies 7440-44-0, Carbon, biological studies 7727-37-9, Nitrogen, biological studies
RL: PEP (Physical, engineering or chemical process); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)
(silicon **dioxide** contg.; method for coating elastomer components for medical uses for friction redn.)

ANSWER 13 OF 29 CA COPYRIGHT 2002 ACS
IC ICM C23C014-08
ICS C23C014-10; C23C014-20; C23C014-32
NCL 427/255 (Coatings, Inks, and Related Products)
CC 38-3 (Plastics Manufacture and Processing)
Section cross-reference(s): 39
Silicon **dioxide** deposition by plasma activated evaporation

process
polycarbonate abr[redacted]on resistant coating silica; p[redacted]ma coating silica polycarbonate; argon nitrous **oxide** plasma coating
Coating materials
abrasion-resistant; silicon **dioxide** deposition by plasma activated evapn. process on polycarbonates
Vapor deposition process
chem., **plasma** enhanced; silicon **dioxide** **deposition** by plasma activated evapn. process on polycarbonates
Plastics, miscellaneous
RL: MSC (Miscellaneous)
metal **oxide** deposition by plasma activated evapn. process on plastics)
Metals, reactions
RL: RCT (Reactant); RACT (Reactant or reagent)
(metal **oxide** deposition by plasma activated evapn. process on plastics)
Oxides (inorganic), reactions
RL: RCT (Reactant); RACT (Reactant or reagent)
(metal **oxide** deposition by plasma activated evapn. process on plastics)
Electron beams
Plasma
silicon **dioxide** **deposition** by plasma activated evapn. process on polycarbonates)
Silazanes
RL: RCT (Reactant); RACT (Reactant or reagent)
(silicon **dioxide** deposition by plasma activated evapn. process on polycarbonates)
Polycarbonates, uses
RL: TEM (Technical or engineered material use); USES (Uses)
silicon **dioxide** deposition by plasma activated evapn. process on polycarbonates)
Silanes
RL: RCT (Reactant); RACT (Reactant or reagent)
(siloxanes; silicon **dioxide** deposition by plasma activated evapn. process on polycarbonates)
7429-90-5, Aluminum, reactions 7440-32-6, Titanium, reactions
RL: RCT (Reactant); RACT (Reactant or reagent)
(metal **oxide** deposition by plasma activated evapn. process on plastics)
7440-37-1, Argon, uses 7782-44-7, Oxygen, uses 10024-97-2, Nitrogen **oxide** (N2O), uses
RL: DEV (Device component use); USES (Uses)
plasma; silicon **dioxide** **deposition** by plasma activated evapn. process on polycarbonates)
7631-86-9, Silica, uses
RL: PEP (Physical, engineering or chemical process); PRP (Properties);
TEM
(Technical or engineered material use); PROC (Process); USES (Uses
silicon **dioxide** deposition by plasma activated evapn. process on polycarbonates)
[redacted]-14-4, Tetraethyl orthosilicate 107-46-0, Hexamethyldisiloxane
[redacted]-67-2, Octamethylcyclotetrasiloxane 1450-14-2, Hexamethyldisilane
2370-88-9, Tetramethylcyclotetrasiloxane 7440-21-3, Silicon, reactions
3011O-74-8, Tetramethyldisiloxane
RL: RCT (Reactant); RACT (Reactant or reagent)
(silicon **dioxide** deposition by plasma activated evapn. process on polycarbonates)

L7 ANSWER 14 OF 29 CA COPYRIGHT 2002 ACS
IC ICM C23C016-40
ICS C23C016-30; C23C016-50
CC 42-2 (Plastics Fabrication and Uses)
Section cross-reference(s): 40

[illegible] abrasive resistant plasma coating; tetramethyldisiloxane vapor deposition
coating; arc plasma deposition metal oxide
[illegible] coating materials
abrasion-resistant protective coating by high rate arc plasma
deposition)
IT Vapor deposition process
(chem.; protective coating by high rate arc plasma
deposition)
IT Coating process
plasma spraying; protective coating by high rate arc
plasma deposition
IT Coating process
(protective coating by high rate arc plasma
deposition)
IT 7--10-4 107-46-0, Hexamethyldisiloxane 556-67-2,
Octamethylcyclotetrasiloxane 1314-13-2, Zinc oxide, uses
1471-14-2, Hexamethyldisilane 2370-88-9, Tetramethylcyclotetrasiloxane
7631-86-9, Silicon oxide, uses 13463-67-7, Titanium
dioxide, uses 30110-74-8, Tetramethyldisiloxane
RL: PEP (Physical, engineering or chemical process); TEM (Technical or
engineered material use); PROC (Process); USES (Uses)
protective coating by high rate arc plasma
deposition

L7 ANSWER 15 OF 29 CA COPYRIGHT 2002 ACS
CC 76-3 (Electric Phenomena
Section cross-reference(s): 75
TI Deposition of SiO2 films from novel alkoxysilane/O2 plasmas
KW PECVD silica alkoxysilane plasma
IT Silanes
RL: RCT (Reactant); RACT (Reactant or reagent)
(alkoxy; deposition of SiO2 films from novel alkoxysilane/O2
plasmas)
IT Activation energy
Semiconductor device fabrication
deposition of SiO2 films from novel alkoxysilane/O2 plasmas
IT Vapor deposition process
plasma; deposition of SiO2 films from
novel alkoxysilane/O2 plasmas)
IT 7631-86-9P, Silica, processes
RL: DEV (Device component use); PEP (Physical, engineering or chemical
process); PNU (Preparation, unclassified); PREP (Preparation); PROC
(Process); USES (Uses)
deposition of SiO2 films from novel alkoxysilane/O2 plasmas
IT 7--10-4, TEOS 78-66-1, Fluorotriethoxysilane 681-84-5, TMOS
1185-30-1, Triethoxysilane 2487-90-3, Trimethoxysilane
4767-99-6, Chlorotriethoxysilane 7782-44-7, Oxygen, reactions
RL: RCT (Reactant); RACT (Reactant or reagent)
(deposition of SiO2 films from novel alkoxysilane/O2 plasmas
IT 7440-21-3, Silicon, processes
RL: DEV (Device component use); PEP (Physical, engineering or chemical
process); PROC (Process); USES (Uses)
(substrates; deposition of SiO2 films from novel
alkoxysilane/O2 plasmas)

L7 ANSWER 16 OF 29 CA COPYRIGHT 2002 ACS
IN [illegible] 003C016-4]
IN [illegible] 023C016-50; 003B111-11
CC 76-11 (Optical, Electron, and Mass Spectroscopy and Other Related
Properties)
Section cross-reference(s): 75
TI Low refractive index SiO2 film and process for producing the
[illegible]
KW fluorine dopant silica antireflective film
IT Vapor deposition process

indexes and their prodn.)
L[illegible] ANSWER 17 OF 17 HCA COPYRIGHT 2002 ACS
IT Antireflective films
fluorine-contg. dopant-contg. silica films with low refractive
[illegible]-ex
and their prodn.
IT Vapor deposition process
(plasma; fluorine-contg. dopant-contg. silica films with low
refractive
indexes and their prodn.)
IT 76-16-4, Hexafluoroethane 78-10-4, Tetraethoxysilane 78-10-4D,
Tetraethoxysilane, fluorine-substituted 107-46-0, Hexamethyldisiloxane
107-46-0D, Hexamethyldisiloxane, fluorine-substituted 542-91-6,
Dimethylsilane 542-91-6D, Dimethylsilane, fluorine-substituted
[illegible]-7,
Octamethylcyclotetrasiloxane 556-67-2D, Octamethylcyclotetrasiloxane,
fluorine-substituted 694-53-1, Phenylsilane 694-53-1D, Phenylsilane,
fluorine-substituted 992-94-9, Methylsilane 992-94-9D, Methylsilane,
fluorine-substituted 993-07-7, Trimethylsilane 993-07-7D,
Trimethylsilane, fluorine-substituted 1111-74-6, Dimethylsilane
[illegible]-74-6D, Dimethylsilane, fluorine-substituted 1185-55-3,
Methyltrimethoxysilane 1185-55-3D, Methyltrimethoxysilane,
fluorine-substituted 18154-66-1, Propylsilane 18154-66-1D,
Propylsilane, fluorine-substituted **30110-74-8**,
Tetramethyldisiloxane **30110-74-8D**, Tetramethyldisiloxane,
fluorine-substituted
RL: MOA (Modifier or additive use); NUU (Other use, unclassified); PEP
(Physical, engineering or chemical process); PROC (Process); USES (Uses)
(fluorine-contg. dopant-contg. silica films with low refractive
[illegible]dexes
and their prodn.
IT 7782-44-7, Oxygen, uses
RL: NUU (Other use, unclassified); PEP (Physical, engineering or chemical
process); PROC (Process); USES (Uses)
(fluorine-contg. dopant-contg. silica films with low refractive
[illegible]-ex
and their prodn.)
IT 7631-86-9, Silica, uses
RL: PEP (Physical, engineering or chemical process); TEM (Technical or
engineered material use); PROC (Process); USES (Uses)
(fluorine-contg. dopant-contg.; fluorine-contg. dopant-contg. silica
films with low refractive indexes and their prodn.)
IT [illegible]-15-4, Perfluoropropene
RL: MOA (Modifier or additive use); NUU (Other use, unclassified); PEP
(Physical, engineering or chemical process); PROC (Process); USES (Uses)
(in prodn. of fluorine-contg. dopant-contg. silica films with low
refractive indexes)
IT 2551-62-4, Sulfur hexafluoride
RL: MOA (Modifier or additive use); NUU (Other use, unclassified); PEP
(Physical, engineering or chemical process); PROC (Process); USES (Uses)
(silica doped with; fluorine-contg. dopant-contg. silica films with
low
refractive indexes and their prodn.)
IT 75-73-0, Perfluoromethane 7782-41-4, Fluorine, uses
RL: MOA (Modifier or additive use); PEP (Physical, engineering or
chemical
process); TEM (Technical or engineered material use); PROC (Process);
USES
(Uses)
(silica doped with; fluorine-contg. dopant-contg. silica films with
low
refractive indexes and their prodn.)

L[illegible] ANSWER 17 OF 17 HCA COPYRIGHT 2002 ACS
IC ICM H01L021-31
ICS C23C016-18; C23C016-40; C23C016-50; H01L021-316

[illegible] (Crystallography and Liquid Crystals
Section cross-reference[illegible] : 76
TI Plasma chemical vapor deposition CVD
[illegible] apparatus and manufacture of oxide film using it
plasma CVD app silicon oxide film
IT Semiconductor device fabrication
manuf. of silicon oxide film by using plasma
CVD app.)
[illegible] deposition apparatus
[illegible] deposition apparatus
plasma; manuf. of silicon oxide film by using
plasma CVD app.
IT [illegible]-66-9P, Silicon oxide, preparation
RL: IMF (Industrial manufacture); TEM (Technical or engineered material
use); PREP (Preparation); USES (Uses)
(manuf. of silicon oxide film by using plasma
CVD app.)
IT [illegible]-01-2, Hydrazine, [illegible] 7664-41-7, Ammonia, uses
RL: MOA (Modifier or additive use); USES (Uses)
manuf. of silicon oxide film by using plasma
CVD app.)
IT [illegible]-37-1, Argon, uses
RL: NUU (Other use, unclassified); USES (Uses)
manuf. of silicon oxide film by using plasma
CVD app.)
IT [illegible]-10-4, Tetraethyl orthosilicate 998-30-1, Triethoxysilane
2487-90-3, Trimethoxysilane
RL: RCT (Reactant); RACT (Reactant or reagent)
manuf. of silicon oxide film by using plasma
CVD app.)
IT [illegible]-44-7, Oxygen, uses 10024-97-2, Nitrogen oxide (N2O), uses
RL: NUU (Other use, unclassified); USES (Uses)
oxidant; manuf. of silicon oxide film by using
plasma CVD app.)

L1 ANSWER 18 OF 29 CA COPYRIGHT 2002 ACS
IC ICM H01L021-316
ICS H01L021-205; H01L021-285; H01L021-31
CC 76-3 (Electric Phenomena)
Section cross-reference(s): 75
TI Plasma chemical vapor deposition apparatus and
manufacture of semiconductor device
IT plasma CVD app silicon oxide semiconductor;
oxyfluoride silicon plasma CVD app semiconductor; elec
insulator silicon oxide plasma CVD
IT Electric insulators
Semiconductor device fabrication
(plasma CVD app. for manuf. of silicon
oxide film of semiconductor device)
IT Vapor deposition apparatus
Vapor deposition apparatus
(plasma; plasma CVD app. for manuf. of
silicon oxide film of semiconductor device)
IT [illegible]-31-66-9P, Silicon oxide, processes 11099[illegible]-88-3, Silicon
fluoride oxide
RL: DEV (Device component use); IMF (Industrial manufacture); PEP
(Physical, engineering or chemical process); PREP (Preparation); PROC
(Process); USES (Uses)
(plasma CVD app. for manuf. of silicon
oxide film of semiconductor device)
IT [illegible]-10-4 358-60-1, Triethoxyfluorosilane [illegible]-[illegible]-1, Triethoxysilane
2487-90-3, Trimethoxysilane 7782-44-7, Oxygen, processes
[illegible]-62-5, Silane, processes 10024-97-2, Nitrogen oxide (N2O),
uses 10028-15-6, Ozone, processes 33498-14-0,
Chlorotrimethoxysilane
RL: PEP (Physical, engineering or chemical process); PROC (Process

plasma CVD [illegible]
oxide film of semiconductor device

L   ANSWER 19 OF 29 CA COPYRIGHT 2002 ACS
I   ICM H01L021-31
     ICS C23C016-50; H01L021-768
     CC   76-11 (Electric Phenomena)
     Section cross-reference(s): 75
TI   Parallel planar electrode **plasma** chemical vapor
     deposition apparatus and manufacture of semiconductor devices
ST   parallel planar electrode **plasma CVD** app; silica
     plasma CVD semiconductor device
IT   Semiconductor devices
        (parallel planar electrode **plasma CVD** of silica
        films in prepn. of devices)
IT   Vapor deposition process
        (plasma, parallel planar electrode; formation of silica film at low
        chamber pressures in prepn. of semiconductor devices)
IT   Vapor deposition apparatus
        (plasma, parallel planar electrode; generation of **plasma** at
        low chamber pressure for **deposition** of **insulating**
        films)
IT   7631-86-9P, Silica, processes
     RL: DEV (Device component use); PEP (Physical, engineering or chemical
     process); SPN (Synthetic preparation); PREP (Preparation); PROC
     (Process);
     USES (Uses)
        (film; parallel planar electrode **plasma CVD** for
        semiconductor devices)
IT   1-9890-22-0, Fluorodipropoxysilane
     RL: NUU (Other use, unclassified); PEP (Physical, engineering or chemical
     process); PROC (Process); USES (Uses)
        (for parallel planar electrode **plasma CVD** of silica
        films)
IT   358-60-1, Triethoxyfluorosilane 998-30-1, Triethoxysilane
     2487-90-3, Trimethoxysilane 13465-71-6, Trifluorosilane
     13824-36-7, Difluorosilane (SiH2F2) 39486-18-1, Fluorotrimethoxysilane
     173243-91-1, Fluorotripropoxysilane 173459-84-0, Fluorodiethoxysilane
     1-9890-21-9, Fluorodimethoxysilane
     RL: NUU (Other use, unclassified); PEP (Physical, engineering or chemical
     process); PROC (Process); USES (Uses)
        (source gas; for parallel planar electrode **plasma CVD**
        of silica films)

L   ANSWER 20 OF 29 CA COPYRIGHT 2002 ACS
I   ICM H01L021-31
     ICS H01L021-205; H01L021-316
     CC   76-3 (Electric Phenomena)
     Section cross-reference(s): 75
TI   Chemical vapor deposition apparatus and manufacture of semiconductor
     device
ST   CVD **insulator** film semiconductor device; ozone alkoxide
     insulator semiconductor device
IT   Semiconductor devices
        (CVD app. and manuf. of semiconductor device)
IT   Vapor deposition process
        (**plasma; CVD** app. and manuf. of semiconductor
        device)
IT   7631-86-9P, Silica, processes
     RL: DEV (Device component use); IMF (Industrial manufacture); PEP
     (Physical, engineering or chemical process); PREP (Preparation); PROC
     (Process); USES (Uses)
        (CVD app. and manuf. of semiconductor device)
IT   78-10-4, TEOS 681-84-5, Tetramethyl orthosilicate 998-30-1,
     Triethoxysilane **2487-90-3**, Trimethoxysilane 10028-15-6, Ozone,
     processes

[illegible] (Technical or
engineered materi[illegible] ; [illegible] ; USES [illegible]
source; CVD app. and manuf. of semiconductor device

[illegible] ANSWER 21 OF 29 CA COPYRIGHT 2002 ACS
[illegible] B32B009-00
[illegible] B32B027-[illegible]
[illegible] (Plastics Fabrication and Uses)
Section cross-reference(s): [illegible]
TI Transparent, gas-barrier films
[illegible] transparent gas barrier film; liq crystal display gas barrier film;
polysilazane coating polyether sulfone transparent film; silicon
oxide vapor deposition barrier film
[illegible] Vapor deposition process
plasma; transparent gas-barrier films having silicon
oxide layers **deposited** by **plasma** chem.
vapor **deposition**, for liq. crystal display)
[illegible] Polysulfones, uses
Polysulfones, uses
RL: POF (Polymer in formulation); PRP (Properties); TEM (Technical or
engineered material use); USES (Uses)
(polyether-, films; transparent gas-barrier films having silicon
oxide layers, for liq. crystal display
IT Polyethers, uses
Polyethers, uses
RL: POF (Polymer in formulation); PRP (Properties); TEM (Technical or
engineered material use); USES (Uses)
(polysulfone-, films; transparent gas-barrier films having silicon
oxide layers, for liq. crystal display
IT Coating materials
(silicon **oxide**; transparent gas-barrier films having silicon
oxide layers, for liq. crystal display
[illegible] Silazanes
RL: RCT (Reactant); RACT (Reactant or reagent)
(transparent gas-barrier films having silicon **oxide** layers
produced from polysilazanes, for liq. crystal display)
IT Liquid crystal displays
Transparent films
(transparent gas-barrier films having silicon **oxide** layers,
for liq. crystal display)
[illegible] 7631-86-9P, Silica, uses
RL: IMF (Industrial manufacture); MOA (Modifier or additive use); PRP
(Properties); TEM (Technical or engineered material use); PREP
(Preparation); USES (Uses)
(coatings; transparent gas-barrier films having silicon **oxide**
layers, for liq. crystal display)
IT [illegible]-42-9, Talpa [illegible]
RL: POF (Polymer in formulation); PRP (Properties); TEM (Technical or
engineered material use); USES (Uses)
(film; transparent gas-barrier films having silicon **oxide**
layers, for liq. crystal display
IT **30110-74-8**, Tetramethyldisiloxane
RL: RCT (Reactant); RACT (Reactant or reagent)
(transparent gas-barrier films having silicon **oxide** layers
produced from tetramethyldisiloxane, for liq. crystal display)

[illegible] ANSWER 22 OF 29 CA COPYRIGHT 2002 ACS
[illegible] H01L021-316
[illegible] C23C016-50; H01L021-205; H01L021-285; H01L021-768; H05H001-46
[illegible] Crystallography and Liquid Crystals
Section cross-reference(s): [illegible]
[illegible] Manufacture of silicon **oxide** film by **plasma** chemical
vapor **deposition** for semiconductor device
[illegible] silicon **oxide** **plasma** CVD interlayer
insulator; alkoxysilane **plasma** CVD silicon
oxide; water resistance silicon **oxide** **plasma**

CVD; step coverage **plasma** **oxide** **plasma**
CVD
IT Electric insulators and dielectrics
(semiconductor devices
plasma **CVD** of silicon **oxide** film for
interlayer **insulator** of semiconductor device
IT Silanes
RL: PEP (Physical, engineering or chemical process); RCT (Reactant); PROC (Process); RACT (Reactant or reagent)
(alkoxy, **plasma** **CVD** of silicon **oxide** film
for interlayer **insulator** of semiconductor device
IT Vapor deposition processes
plasma, **plasma** **CVD** of silicon
oxide film for interlayer **insulator** of semiconductor
device)
IT 7631-86-9P, Silicon **oxide**, processes
RL: IMF (Industrial manufacture); PEP (Physical, engineering or chemical process); TEM (Technical or engineered material use); PREP (Preparation); PROC (Process); USES (Uses)
plasma **CVD** of silicon **oxide** film for
interlayer **insulator** of semiconductor device
IT 1333-74-0, Hydrogen, uses
RL: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses)
plasma **CVD** of silicon **oxide** film for
interlayer **insulator** of semiconductor device
IT 2487-90-3, Trimethoxysilane
RL: PEP (Physical, engineering or chemical process); RCT (Reactant); PROC (Process); RACT (Reactant or reagent)
(**plasma** **CVD** of silicon **oxide** film for
interlayer **insulator** of semiconductor device

L7 ANSWER 23 OF 29 CA COPYRIGHT 2002 ACS
L7 IPM B32B009-00
IPC C08J007-00; C08J007-04; B29C014-06; B29C 16-2
NCL 428-3 (Plastics Fabrication and Uses)
Section cross-reference(s): 17, 63
TI Transparent gas-barrier laminated packaging films
KW gas barrier film metal **oxide**; carbon silicon **oxide**
film packaging; transparency laminated film oxygen barrier; food
pharmaceutical packaging film laminated
IT Food
Pharmaceuticals
(packaging materials for; transparent gas-barrier inorg.
compd.-deposited packaging films)
IT Vapor deposition processes
(**plasma**-excited; transparent gas-barrier inorg. compd.-
deposited packaging films)
IT Packaging materials
(films, transparent gas-barrier inorg. compd.-deposited packaging
films)
IT 7631-86-9P, Silicon **oxide**, uses
RL: FFD (Food or feed use); IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(manuf. of carbon-contg.; transparent gas-barrier inorg.
compd.-deposited packaging films)
IT 107-46-0, Hexamethyldisiloxane **30110-74-8**, Tetramethyldisiloxane
RL: RCT (Reactant); RACT (Reactant or reagent)
(silicon **oxide** from; in transparent gas-barrier inorg.
compd.-deposited packaging films)
IT 25038-59-9, PET (polyester), uses
RL: FFD (Food or feed use); PEP (Physical, engineering or chemical process); PRP (Properties); TEM (Technical or engineered material use);

...uses)
...(transparent gas-barrier inorg. compd.-deposited packaging films
IT ...19-48-4, Magnesium **oxide**, uses ...440-44-0, Carbon, uses
...: EPD (Field or feed use ; PRP Properties ; TEM Technical or ...
...material use ; THU Therapeutic use ; BIOL Biological study ; USES ...
...
...transparent gas-barrier inorg. compd.-deposited packaging films
IT ...-18-44-7, Oxygen, miscellaneous
...: MSC Miscellaneous
...transparent gas-barrier inorg. compd.-deposited packaging films

L ...ANSWER 24 OF 29 ...A COPYRIGHT 2002 ACS
...M H01L021-768
...C H01L021-316
...-3 Electric Phenomena
IT Manufacture of semiconductor devices
...emiconductor device silica **insulating** interlayer;
...trialkoxysilane source silica film; silsesquioxane hydride source silica
film
IT Transistors
(MOS; silica **insulating** interlayers from trialkoxysilane or
silsesquioxane hydride
IT Vapor deposition process
formation of silica **insulating** interlayers from
trialkoxysilane or silsesquioxane hydride for semiconductor devices)
IT Silsesquioxanes
...: RCT (Reactant ; RACT Reactant or reagent)
(hydride, source gas; for CVD of silica interlayers in semiconductor
devices)
IT Semiconductor devices
(silica **insulating** interlayers from trialkoxysilane or
silsesquioxane hydride
IT Silanes
...: RCT (Reactant); RACT Reactant or reagent)
(source gas; for CVD of silica interlayers in semiconductor devices)
IT ...31-86-9, Silica, uses
RL: DEV (Device component use ; USES (Uses)
(film; **insulating** interlayers from trialkoxysilane or
silsesquioxane sources for semiconductor devices)
IT ...-10-4, Tetraethoxysilane ...99-80-1, Triethoxysilane **2487-90-3**
, Trimethoxysilane ...6485-85-4, Tripropoxysilane ...6485-86-5,
Tributoxysilane ...7803-62-5, Silane, reactions
RL: RCT (Reactant); RACT Reactant or reagent)
(source gas; for CVD of silica interlayers in semiconductor devices)

L ANSWER 25 OF 29 ...A COPYRIGHT 2002 ACS
...M H01G004-30
...S C23C016-04; C23C016-44; C23C016-54
...-10 (Electric Phenomena)
Section cross-reference(s): 35, 75
TI Method for depositing a **dielectric** and/or conductive material on
a substrate
...: Dielec deposition CVT; conductor elec deposition CVD
IT Electric capacitors
Electric conductors
Electric insulators and Dielectrics
Electric resistors
Polymerization
Vapor deposition processes
(method for depositing a dielec. and/or conductive material on a
substrate)
IT Silazanes
Siloxanes and Silicones, processes
...: PEP (Physical, engineering or chemical process); RCT (Reactant ; PROC

method for dep ting a dielec. and/or conduct material on a
substrate)

IT Silanes
RL: PEP (Physical, engineering or chemical process) ; RCT (Reactant) ; PROC (Process); RACT (Reactant or reagent)
(alkoxy, method for depositing a dielec. and/or conductive material on a substrate)

IT Ethers, processes
RL: PEP (Physical, engineering or chemical process) ; RCT (Reactant) ; PROC (Process); RACT (Reactant or reagent)
(silyl, method for depositing a dielec. and/or conductive material on a substrate)

IT 7783-06-4, Hydrogen sulfide, processes 10545-99-0, Sulfur dichloride 30110-74-8, Tetramethyldisiloxane
RL: PEP (Physical, engineering or chemical process); RCT (Reactant) ; PROC (Process); RACT (Reactant or reagent)
(method for depositing a dielec. and/or conductive material on a substrate)

L2 ANSWER 26 OF 29 CA COPYRIGHT 2002 ACS
IC ICM H01L021-316
ICS C23C016-40
CC 76-10 (Electric Phenomena)
Section cross-reference(s): 75
TI Forming an **insulating** film
ST **insulating** film **plasma CVD**; silicon contg **insulating** film **plasma CVD**
IT Electric insulators and Dielectrics
(**plasma CVD** of films of)
IT Silanes
Siloxanes and Silicones, processes
RL: PEP (Physical, engineering or chemical process); PROC (Process)
(**plasma CVD** of **insulating** films from)
IT Vapor deposition processes
(plasma, of dielec. films)
IT 12033-01-4P, Silicon nitride **oxide**
RL: PEP (Physical, engineering or chemical process); PNU (Preparation, unclassified); PREP (Preparation) ; PROC (Process)
(**plasma CVD** of films of)
IT 998-30-1, Triethoxysilane 2487-90-3, Trimethoxysilane 30110-74-8, Tetramethyldisiloxane
RL: PEP (Physical, engineering or chemical process); PROC (Process)
(**plasma CVD** of **insulating** films from)

L2 ANSWER 27 OF 29 CA COPYRIGHT 2002 ACS
IC ICM H01L031-04
CC 52-2 (Electrochemical, Radiational, and Thermal Energy Technology)
TI Solar cell sheets
ST silicon solar cell gas barrier; silica gas barrier solar cell; polymer gas barrier solar cell
IT Vapor deposition processes
(plasma, manuf. of silica coated gas barrier polymer films for amorphous silicon solar cell sheets)
IT Polysulfones, uses
RL: DEV (Device component use); USES (Uses)
(polyether-, silica coated gas barrier polymer films for amorphous silicon solar cell sheets)
IT Polyethers, uses
RL: DEV (Device component use); USES (Uses)
(polysulfone-, silica coated gas barrier polymer films for amorphous silicon solar cell sheets)
IT 30110-74-8, Tetramethyl disiloxane
RL: RCT (Reactant) ; RACT (Reactant or reagent)

manuf. of [illegible]
silicon solar [illegible] sheets

IT 7440-21-3, Silicon, uses 7631-86-9, Silica, uses 25154-52-3, Kapton-
RL: DEV (Device component use ; USES (Use
silica coated gas barrier polymer films for amorphous silicon solar
cell sheets

L ANSWER 28 OF 29 CA COPYRIGHT 2002 ACS
IC H01L (Electric Phenomena
TI Plasma-enhanced chemical vapor deposition of
SiO2 using novel alkoxysilane precursors
plasma CVD deposition silica alkoxysilane
precursor
IT Vapor deposition processes
plasma, of SiO2 using novel alkoxysilane precursors
IT 7440-21-3, Silicon, uses
RL: NUU (Other use, unclassified ; USES (Uses
plasma-enhanced CVD deposition of
SiO2 on silicon
IT 7647-14-5, Sodium chloride, uses
RL: NUU (Other use, unclassified ; USES (Uses
plasma-enhanced CVD deposition of
SiO2 on sodium chloride
IT 7631-86-9, Silicon dioxide, formation (nonpreparative)
RL: FMU (Formation, unclassified ; FORM (Formation, nonpreparative
plasma-enhanced CVD deposition of
SiO2 using novel alkoxysilane precursors
IT 78-10-4 681-84-5, Tetramethoxysilane 994-30-1, Triethoxysilane
2487-90-3, Trimethoxysilane
RL: RCT (Reactant); RACT (Reactant or reagent)
plasma-enhanced CVD deposition of
SiO2 using novel alkoxysilane precursors

L ANSWER 29 OF 29 CA COPYRIGHT 2002 ACS
IC ICM B32B009-00
ICS B32B007-02; B32B027-18; G02F001/14-06; H01B013-00
CC 74-13 (Radiation Chemistry, Photochemistry, and Photographic and Other
Reprographic Processes
TI Gas barrier type transparent electroconductive laminate for liquid
crystal
display
ST gas barrier transparent electroconductive laminate; liq crystal
transparent electroconductive laminate
IT Optical imaging devices
(electrooptical liq.-crystal, gas barrier type transparent
electroconductive laminate for)
IT Vapor deposition processes
(plasma, for forming gas barrier type transparent electroconductive
laminate for liq. crystal display)
IT Polyketones
RL: TEM (Technical or engineered material use); USES (Uses)
(polyester-polyether-, as substrate for forming gas barrier type
transparent electroconductive laminate for liq. crystal display
IT Polyethers, uses
RL: TEM (Technical or engineered material use); USES (Uses)
(polyester-polyketone-, as substrate for forming gas barrier type
transparent electroconductive laminate for liq. crystal display
IT Polyesters, uses
RL: TEM (Technical or engineered material use); USES (Uses)
(polyether-polyketone-, as substrate for forming gas barrier type
transparent electroconductive laminate for liq. crystal display
IT Polyesters, uses
RL: TEM (Technical or engineered material use); USES (Uses)
(sulfonates, as substrate for forming gas barrier type transparent
electroconductive laminate for liq. crystal display)
IT 107-46-0, Hexamethyl disiloxane 1185-55-3, Methyl trimethoxy silane

...iloxane
FL: PEP (Physical, ...ing or chemical process ; TEM (Technical or ...ineered material use ; PROC (Process ; USES (Uses
as CVD gas for formin... gas barrier type transparent electroconductive laminate for liq... crystal displays